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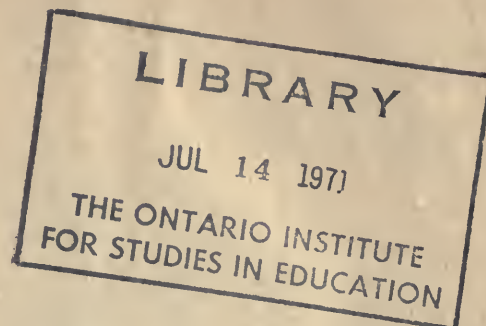
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EDUCATIONAL REVIEW



MRS. G. U. HAY, PROPRIETOR.
ELEANOR ROBINSON, EDITOR AND MANAGER.

Volume XXVII

ST. JOHN, N. B., CANADA, 1914.

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NEW ADVERTISEMENTS:—

N. B. School Calendar (p. 27); Summer School of Science (p. 4); Imperial Oil Co. (p. 26).

THE EDUCATIONAL REVIEW is published on the tenth of each month, except July. Subscription price, one dollar a year; single numbers, ten cents. Postage is prepaid by the publishers, and subscriptions may begin with any number.

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If a subscriber wishes the paper to be discontinued at the expiration of the subscription, notice to that effect should be sent. Otherwise it is assumed that a continuance of the subscription is desired. It is important that subscribers attend to this in order that loss and misunderstanding may be avoided.

The number accompanying each address tells to what date the subscription is paid. Thus "313" shows that the subscription is paid to July 1, 1913.

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St. John, N. B.

The REVIEW will not be issued in July.

All subscribers whose subscriptions are in arrears are particularly requested to make prompt payment in order that the estate business of the late Editor and Manager of the Review may be settled.

The acting editors of the REVIEW wish to thank those who have contributed to this number, and the many correspondents who have expressed approval of the arrangements that are made for its continuance. They feel assured that under the new management, which begins with the August number, the REVIEW will command the hearty support of teachers in the Atlantic Provinces and elsewhere; and maintain the high standard which it reached and held for so long a time under the editorial management of Dr. Hay.

The teaching profession throughout the Maritime Provinces will be glad to learn that the EDUCATIONAL REVIEW which for so many years was published by Dr. G. U. Hay, will be continued. It is understood that Miss Eleanor Robinson, who for a number of years has been engaged in conducting a private school in the city, will assume the editorship. Miss Robinson is a talented lady and an experienced teacher well qualified to make the REVIEW as valuable and as interesting as Dr. Hay planned it to be. The paper is to continue under the control of Mrs. Hay and Miss Robinson as manager and editor, a combination that cannot fail to be satisfactory to teachers and educationists everywhere.—St. John Globe.

"A Busy Teacher" sends this tribute to the usefulness of our "Current Events" page:

"Recently, while preparing a geography lesson on Tripoli, I was completely at a loss to know where to turn for details about the recent war between Italy and the Turks. A friend reminded me of my old friend and standby, the "Current Events" page of the REVIEW. I was fortunately able to turn to a bound volume of the Review for 1911-1912, and a very few minutes I had all the information I required. I need hardly add that I felt very grateful to those responsible for that excellent and useful portion of your paper."

The "Current Events" department will be carried on next year under Mr. Vroom's able management. Professor DeWolfe will continue his interesting and suggestive papers on Botany and Professor Perry's valuable notes for the study of

birds and insects will be another attraction. There will be special provision for the Primary Department, beginning with a set of lessons on Number Work. Notes for lessons on English History, to accompany and supplement the text-book in the lower grades, are also planned.

It is to be hoped that many teachers will take advantage of the opportunities offered by the Summer Schools. Our readers will find detailed information about the Summer School of Science meeting at Halifax in another column. Three weeks could hardly be better spent than in attendance there. For those who can give a longer time, there is the Rural Science School at Truro. The University of Toronto has a Summer Session from July 2nd until August 8th, including special courses for teachers. The fee for one course is \$10; for three courses \$8.00. Board in one of the University Residences is \$5.00 a week.

The Summer School of Harvard University offers its usual great variety of courses with many attractions in the way of evening lectures, and excursions to interesting places. The minimum expense is reckoned at \$70.00 for the six weeks. This does not include travelling expenses.

The Summer Courses in French offered by McGill University are to be given at MacDonald College.

McGill also has a Summer School for Librarians. June 23rd to July 19th. The estimated minimum expense, not including travelling expenses, is \$35.00.

TO SUBSCRIBERS.

The Future Management of the Review.

It will be exceedingly gratifying to all readers of the REVIEW to know that the paper which for a quarter of a century has been so closely connected with the life and personality of Dr. G. U. Hay, is to be continued under the direction and control of his wife, Mrs. Frances Anetta Hay, whose sympathies and ideals were identical with his own. Closely associated with Mrs. Hay in the administration of the paper will be Miss Eleanor Robinson, of 174 Waterloo Street, St. John, who becomes its new editor and manager. Miss Robinson, both on account of her educational experience and former association with Dr. Hay, is well qualified for this work, and it was the desire of the late editor that this arrangement should be made. Co-operating with Miss Robinson in the general supervision of

the paper, there will be an Advisory Committee, composed of Mrs. G. U. Hay, Mr. J. Vroom, Superintendent A. H. Mackay, Principal David Solon, Dr. W. S. Carter, Rev. W. O. Raymond and Professor H. G. Perry.

By this arrangement it is assured that the highest interests both of the paper and of education will be fostered and conserved.

F. S. P.

THE RURAL SCIENCE SCHOOL.

The Rural Science School, which meets in Truro, July 9 to August 8, promises to be of more than usual interest. The faculty of the N. S. Provincial Normal College selected over thirty of their most promising nature students in April, and allowed them to begin their Rural Science course then. These students will remain during the present summer course. The presence of such a group will be an inspiration to others who may join us in July.

Teachers of all grades may qualify for the certificate in Physical Training. Those holding Class "A" or "B" License; and those of Class "C," if they have a "B" certificate, may qualify for certificates in Science work which lead to increased Provincial grant.

Anyone wishing to become more efficient as a Nature teacher; or who wishes to know more about Insects, Plants, Birds, School Gardens, etc., will do well to avail herself of all opportunities this Rural Science School offers.

Class work, field excursions and good-fellowship are combined in such proportions as to make the summer a pleasant one and profitable.

There is a probability of the money grants to teachers being increased this year, but that will not be definitely settled for a few days yet.

JUNE.

Sunbeams dancing with the daisies,
South wind swinging in the grasses
Butterflies' bewildering mazes,
Gentle croon,
Where the dimpled brooklet passes—
This is June.

Insects humming in the meadow,
Azure haze where vision closes,
Cloudless light, alluring shadow;
Dreamy noon
Filled with scent of hay and roses—
This is June.

—School Supplement.

CENTENNIAL ANNIVERSARIES OF THE
WAR OF 1812.

J. VROOM.

XIII. — The Battle of Beaver Dams.

June 24.— Before daylight on the morning of the twenty-fourth of June, 1813, five or six hundred of the invaders, with two field guns, were quietly advancing through the woods from Queenston to attack a British outpost, when they were fired upon by Indians. They kept on for some distance, returning as well as they could the fire of their unseen foes, whose terrifying yells were as effective as their bullets; then a British officer summoned them to surrender, and they obeyed. This is, in brief, the story of the Battle of Beaver Dams. But it leaves much to be explained, and there are two persons connected with the story who should be particularly mentioned.

The first is Laura Secord, whose name is known to every reader of Canadian history. She had already proved herself a heroine. While the United States troops were in possession of Queenston Heights, after the death of Macdonnell and before the final engagement, she learned that her husband had been wounded in the battle. She found him lying on the battlefield, just in time to save him from two of the enemy who would have killed him with their bayonets. Throwing herself upon his body, she protected him until one of the United States officers came up. The officer promptly sent the two men across the river under arrest, and had Secord taken to his home in the village of Queenston. This occurred on the thirteenth of October, 1812. On the twenty-third of June, 1813, Secord was still confined to his house, not fully recovered from his wounds. Two officers who happened to be billeted there were overheard discussing plans for the capture of the nearest British outpost, thirteen miles distant. The husband could not go to warn the British; so Mrs. Secord set out, accompanied by her niece, to carry the message to her brother's house, some two miles away. When they got there, they found the place deserted; and without hesitation, they determined to go on and deliver the message to Lieutenant FitzGibbon, who was in command of the threatened outpost. To avoid the enemy, they chose a long, circuitous route of nearly twenty miles. The story of deceiving the sentries is not true. They succeeded in passing the sentries without being seen. The niece kept up with Mrs. Secord for a time,

but had to be left behind when she could go no farther; and darkness came on before the long journey was ended. Still the brave woman kept on. At last she came upon an encampment of armed men. They were Indians, and with them she found safety and protection. They took her to the house of a friend, where she received good care; and they sent forward the message which she had brought at the risk of her life. Then they prepared for the bewildering attack in the woods by which the battle was won.

Lieutenant James FitzGibbon, to whom her warning was sent, was at the head of a small independent company of skirmishers that had done good service along the Niagara frontier. We are told that he and his men were all Irishmen, speaking the Irish vernacular. When he and his followers arrived at Beaver Dams, he found the invaders willing to surrender to save themselves from the dreaded Indians, by whom they were surrounded, and of whose numbers they were wholly ignorant. He took advantage of the situation, pretending to have the authority of Major de Haren, of the 104th, to receive their surrender; and he delayed over the arrangement of terms, anxiously waiting for someone with real authority to come to his relief. It so happened that Major de Haren himself came up in time to sign the articles of surrender.

This "unaccountable occurrence," as it was called, was a crushing blow to the invaders. The officer in command of the expedition was freed from blame for his loss of half a thousand men; but his superior officer, General Dearborn, who had left him unsupported, and who had already sent in his resignation, was allowed to retire.

To the memory of Laura Secord, a monument, on which her two heroic deeds are recorded, was erected by the Canadian Government last summer on the battlefield of Queenston Heights. The site of the battle of Beaver Dams, at or near where now the railway from Niagara to Hamilton runs under the Welland Canal, might very well be marked by some memorial of James FitzGibbon; who, by his courage and self-possession, sealed and completed the victory of the Indians; and who modestly disclaimed the praise which was due to him, and ascribed to the Indians all the credit.

Traffic is growing faster on our Great Lakes than anywhere else in the world; and there is being constructed there, on the United States side of the Sault Ste. Marie, a lock which will be bigger than the great locks of the Panama Canal.

BOTANY FOR JUNE.

L. A. DEWOLFE.

The "weeding" season is now here. Through long experience the average farmer knows a weed; but he knows it in a negative way. He simply knows it is not one of his cultivated plants.

The farmers of twenty years hence are now in school. May we teach them something about weeds in a positive way?

In early June many baby weeds are just coming up. Others have been growing lustily since March. Still more will come later. How does it happen that all do not come at the same time? If all did come simultaneously, would each have so good a chance to live as under the present order? These habits of season, as well as habits of locality, are worth studying.

Every class of plants suggests a corresponding class of people. Have you ever thought of that? In the plant kingdom are thieves, robbers, monopolists, social strugglers; the meek and the aggressive; the selfish and, one is half tempted to suspect, the unselfish. Unselfishness, however, is only apparent. Are not these characteristics intensely human? Can you think of a human trait that is not duplicated in plant life?

Weeds are monopolists. They are also robbers. They try to crowd out the weaker members of their society and take complete possession of the field. They are extremely aggressive and persistent in their attempts, and are too often successful.

But let us look at some of these pests and how they proceed to carry out their purpose. As soon as growth begins in the spring one will find the garden green with dandelions, daisies, mouse-ear chickweed, yarrow, clover and buttercups. The clover more than pays its way by adding fertility to the soil. If, however, one wishes to have the ground for some other crop, clover is unwelcome. But how is it that these weeds are so large at the end of March, when the ground has not been warm enough to germinate seeds? Are any of our weeds perennial? Evidently they are,

In some of our text books you will find these early weeds classed as perennials, and others as winter annuals. A winter annual is one that scatters its seed in the summer; and this germinates the same autumn, but does not complete its growth until the following spring. Early in spring, therefore, a winter annual is ready to grow, for its start is already made. Perennials, too, grow early, for

they have a reserve supply of food stored in the root or elsewhere, which is used for quick growth. True annuals, on the other hand, are not weeds of early spring. Warm weather must come before the seeds, which have lain in the ground all winter, can germinate.

Children would like to make a list of all the weeds they can find. The value of the exercise is increased by having them classify their list as suggested in the foregoing. Have them also write remarks on the relative abundance of these weeds. Older children could observe which spread most rapidly, and how they spread. In the school garden or home garden, they could learn how to control these pests.

May I suggest one or two experiments for garden work? Taking equal areas of ground — say one square yard — where couch grass is troublesome, try (1) cutting off the grass with a hoe in dry weather, (2) in wet weather, (3) pulling up by the roots and leaving it on the ground, and (4) pulling up by the roots and burning. As soon as each plot is again green, repeat the operation. Continue it even a third or fourth time if necessary. Keep a record of the dates of each weeding. Also note how many minutes it required to do the work in each case. Remembering that time is worth something, which do you consider the most profitable way of clearing land of couch grass? In autumn after the crops are gathered, experiments (1) and (2) could be repeated by digging instead of hoeing. Digging would, on a small scale, correspond with plowing. Which seems better, deep or shallow digging?

Similar experiments should be tried with other weeds. Where the weed persistently grows again try to find out how it manages to do so. With couch grass, especially, examine the underground root stalks to see how hoeing might spread instead of destroy the plant.

As the season advances try to learn the names and the habits of all weeds as they appear. Keep dates of their first appearance, their rapidity of growth, time of blooming, maturing of seed, etc. Make drawings of each weed at different stages in its growth. Collect and label the seeds. What should you do if you found these same seeds among the garden seeds that you buy next spring? A small magnifying glass known as a linen tester would help greatly in studying seeds.

Following are a few of our commonest weeds that every child should know. Dandelion, Fall-

Dandelion, Daisy, Bindweed, Thistles, Wild Buckwheat, Burdock, Shepherd's Purse, Chickweeds, Mustards, Wild Carrot, Caraway, Lamb's Quarters, Cinquefoil, Cockle, Cudweed, Dock, Sorrel, Knotweed, Smartweed, Great Willow-Herb, Goldenrods, Asters, Groundsel, Ragwort, Heal-all, Mayweed, Yarrow, Hemp Nettle, Corn Spurrey, Pepper Grass, Plantain, Purselane and Yellow Rattle.

NATURE STUDY OF ANIMALS.

H. G. PERRY, WOLFFVILLE, N. S.

Bird Observations — Some Spring Migrants.

SOLITARY SANDPIPER: May 24, along Gaspereau River, near Wolfville.

SPOTTED SANDPIPER: May 1, Wolfville; 9, Gagetown, N. B.

BELTED KINGFISHER: May 27, Wolfville; 21, Gagetown. These seem to be late dates.

NIGHTHAWK: May 21, Wolfville; 17, Gagetown.

CHIMNEY SWIFT was reported in last REVIEW, to which we add: May 18, Wolfville; April 24, Gagetown.

RUBY-THROATED HUMMINGBIRD: May 23, Wolfville.

KINGBIRD: May 13, Wolfville; 19, Lower Norton, N. B.; 13, Gagetown.

LEAST FLYCATCHER: May 7, Wolfville

OLIVE-SIDED FLYCATCHER: May 27, Wolfville.

BOBOLINK: May 13, Wolfville; 17, Lower Norton; April 22, Gagetown.

WHITE-CROWNED SPARROW: May 6, Gagetown; 24, Richibucto.

WHITE-THROATED SPARROW: April 15, Barrington, N. S.; May 3, Gagetown; see also last REVIEW.

CLIFF SWALLOW: April 18, Barrington; May 6, Wolfville; April 15, Gagetown. See last REVIEW.

TREE SWALLOWS: April 28; Gagetown. See last REVIEW.

BLUE-HEADED VIREO: May 10, Wolfville.

BLACK AND WHITE WARBLER OR BLACK AND WHITE CREEPER: May 6, Wolfville; April 28, Gagetown.

NASHVILLE WARBLER: May 10, Wolfville.

TENNESSEE WARBLER: May 16, Gagetown.

N. B. Bird students should carefully compare these two birds, they are much alike and often cause the beginner some trouble. The adults, however are readily distinguished. The Nashville is distinctly yellow on the breast and the under tail

coverts, the breast of the Tennessee is a greenish yellow and under tail-coverts white.

PARULA WARBLER: May 9, Wolfville.

MYRTLE WARBLER: April 18, Barrington; May 4, Gagetown.

MAGNOLIA WARBLER: May 6, Wolfville.

BLACK-POLL WARBLER: May 24, Wolfville.

BLACK-THROATED GREEN WARBLER: May 4, Wolfville.

OVEN-BIRD: May 18, Wolfville.

MARYLAND YELLOW-THROAT: May 4, Barrington; 16, Wolfville.

WILSON'S WARBLER: May 25, Wolfville.

CANADIAN WARBLER: May 15, Barrington.

AMERICAN REDSTART: May 25, Wolfville.

HERMIT THRUSH: May 24, Liverpool.

In addition to the foregoing the following are reported:— Gagetown, English or Wilson's Snipe. April 18; Bald Eagle, April 26; Cuckoo, May 6; Whip-poor-will, May 12. The last two are mentioned as not common in that locality.

A report from Dalhousie, N B., which reached me too late for last issue, mentions the Robin, April 4; Blackbirds, April 5; Song Sparrow, April 7; Junco, April 8; Fox Sparrow, May 19.

Nesting.

With the exception of one report nothing has been sent in regarding the nesting of our birds. I hope our bird students are directing some attention to this phase of the work. It is not enough that we should know the birds, and the time of their return, we should also make careful observations on the building of the nest, the materials used, dates of construction, location, etc., also note the number and size of the eggs, general color, and markings, the period of incubation and the first appearance of young.

A few species should be worked out each year through observation of several nests of each. Do not attempt more than two or three species the first year; these carefully worked out will give better results than a large number but partially observed. You will most likely discover a great number of species in your rambles, these should not be lost sight of, but general notes should be taken on all discoveries.

The following are some extracts from notes on the nesting of birds, Wolfville and vicinity, for the spring of the year. The notes were kindly submitted by a correspondent from Wolfville, a stu-

dent with years of experience in bird study, one of the best authorities in the Maritime Provinces. Hence these extracts are of more than ordinary interest, and will serve as good examples for general notes.

Nesting of Birds, Wolfville and Vicinity.

1913.

- April 18. Discovered three nests of Pine Siskins in state of semi-completion, and one of Golden-crowned Kinglet just started. Saw old and full-grown young of American Crossbill.
- April 21. Saw Sparrow-Hawks preparing a nest. Found nest of the Golden-crowned Kinglet.
- April 22. Discovered a nest of Red-breasted Nuthatch.
- April 23. Found nest of a Golden-crowned Kinglet only three feet from the ground.
- April 25. Out to woods 5.30 a. m. Discovered several Golden-crowned Kinglets building. Two were in most unusual places, one being very near the ground in a small bush, and the other a few feet, three or four, from the ground on a lower limb of a big tree, standing in a clearing, one hundred yards from the woods.
- May 4. Found two nests of Red-breasted Nuthatch, and one of the Chickadee. Visited two Kinglets' nests, previously found, each contained three eggs. One of the Pine Siskin's nests discovered April 18, had been robbed by crows.
- May 9. Spent morning on Ridge. Found Myrtle Warblers building, also Acadian Chickadee, excavating hole in rotten stump. Found Junco's nest with four eggs; Crows' with three, and nest of Hairy Woodpecker containing young birds. The birds had used an old nest in a live beech tree, about thirty feet up. The fact that it was not necessary for the birds to drill out a new nest probably accounts for the early appearance of the young. Visited the nest of the Golden-crowned Kinglet, discovered April 21, and found it abandoned.
- May 10. Spent morning on the Ridge. Found three nests of Myrtle Warblers, about completed. Saw a Red-breasted Nut-

hatch carrying lining for its nest. Found the nest of the Sparrow Hawk, mentioned April 21, to contain five eggs, beautifully marked.

Bird Banding.

I wish to call your attention to the work of the American Bird Banding Association. The report of the work accomplished during 1912 has just been issued, and may be obtained by sending your address to Howard H. Cleaves, Secretary-Treasurer Public Museum, New Brighton, N. Y. Properly constructed metal bands may be obtained from the Association, each one bears a number and also instructions for the finder to return it to the American Museum, N. Y. The band is placed on the leg of the bird, and its number, together with the name of the bird, with date and place of banding sent to the American Museum, N. Y.

I quote two cases from the above mentioned report.

BAND NO. 2816, BLUEBIRD.—Banded at West Allis, Wis., by Dr. R. M. Strong, July 5, 1909. Nestling; one of a brood of several. R. M. S.

Recovered at Evansville, Ill., by August Schilling, April 1, 1912. Killed by a Northern Shrike.

You see at a glance how long this bird had been wearing his band.

BAND NO. 5832. GREAT BLACK-BACKED GULL.—Banded at Lake George, Yar. Co., N. S. by Howard H. Cleaves, July 27, 1912. Fledgling.

Recovered at Prout's Neck, Cumberland Co. Me., by G. C. Libby, December 6, 1912. Found dead on the beach.

Work of this nature arouses interest in bird life and quenches the thirst to rob and kill and tends to turn North America into one great national museum, with its hosts of banded specimens moving over its surface. The mystery of bird migration interests us, we carefully observe the dates of their arrival and departure, we study closely the paths of their coming and going, but withall, how little we yet know of the movements of individual birds! But this new phase of bird study, beginning in 1908, seems a move in the right direction, we have hope for the future.

Question Box.

I submit the following questions, which have been sent to me, for your solution, and I hope you will make careful observations and report to me by the 25th instant: "Why does the Red-breasted

Nuthatch, which nests in a hole in a tree or stump, daub the entrance with balsam, and is this practise habitual?" One of our best local authorities tells me he has never found a nest without its balsamed entrance, and has frequently seen the bird applying the balsam with its bill during the building season.

The second question refers to the point of entrance to the nest of the Woodpeckers. These birds also nest in a hole in a tree or stump. The entrance is said to be very rarely, if ever, found on the westerly side of the tree. Is this a statement of fact, and if so, why is the entrance given an easterly outlook? Also observe the entrance, and its outlook, to the nests of other birds nesting in holes in trees, e. g., Chickadees. The general nature of nest protection should be carefully studied.

The following is from Principal Allen's report in spring arrivals at Yarmouth, chiefly for the month of May:

WILLET: av. first appear., four years,—May 2.

SPOTTED SANDPIPER: av. first appear., three years,—May 14.

NIGHTHAWK: av. first appear., three years,—May 25.

CHIMNEY SWIFT: av. first appear., eleven years,—May 15.

RUBY-THROATED HUMMINGBIRD: av. first appear., five years,—May 21.

LEAST-FLY CATCHER: av. first appear., six years,—May 16.

WHITE-THROATED SPARROW: av. first appear., four years,—May 25.

CLIFF SWALLOW: av. first appear., ten years,—May 17.

BARN SWALLOW: av. first appear., eight years,—May 2.

CEDAR WAXWING: av. first appear., four years,—June 7.

BLACK AND WHITE-WARBLER: av. first appear., seven years,—May 16.

YELLOW WARBLER: av. first appear., eleven years,—May 13.

MAGNOLIA WARBLER: av. first appear., six years,—May 20.

CHESTNUT-SIDED WARBLER: av. first appear., five years,—May 27.

BLACKBURMIAN WARBLER: av. first appear., two years,—May 14.

BLACK-THROATED GREEN WARBLER: av. first appear., eight years,—May 17.

OVEN-BIRD: av. first appear., four years,—May 19.

MARYLAND YELLOW-THROAT: av. first appear., nine years,—May 19.

AMERICAN REDSTART: av. first appear., five years,—May 19.

I wish to have reports for the last part of May and for June mailed to me by June 25, from all who have so kindly helped in this work, and we shall be pleased to hear from all others who have been interested in our Nature Study page.

The well known tonic effects of pine forests are attributed by a German professor to ozone resulting from the electricity produced by the needles. He also asserts that the function of the beards of wheat and rye is to generate the electricity needed for the growth of the plants.

QUESTIONS ON THE HIGH SCHOOL PROSE BOOK, PART I, GRADES IX AND X.

MARGARET WINNIFRED McGRAY.

1. Which of the authors mentioned in your book is the foremost English satirist in prose? Who wrote under the mon de plume of "Boz?" "The Great Unknown?" Who is the greatest of English essayists and the forerunner of the great English novelists? Who became the great authority on the rise and fall of the French dominion in America? Who was a great American novelist and American Consul at Liverpool? Who "never married; lived alone; never went to church; never voted; refused to pay a tax to the state; are no flesh, drank no wine, never knew the use of tobacco; and, though a naturalist, used neither trap nor gun."

2. What other voyages did Gulliver make? Why do you suppose this particular journey was chosen? Do you think "Robinson Crusoe" was written before or after "Gulliver's Travels?" Give reasons for your answer.

3. Explain—"make a shift." Quote from "Don Quixote and the Giants." Victorials—Was the singular form ever used? Quote from Tennyson, Longfellow and The Bible. Explain—metropolis, small wine. Pronounce patron, patronage, patent. Name a few "soporiferous medicines."

4. Mention some "grand natural phenomenon." Was the "Great Stone Face" one? Give reasons for your answer.

5. The very image of the "Great Stone Face!" Of whom was this said? Account for the mistakes made. How did each fall short of the ideal? Who was the very image of the Great Stone Face? Were you surprised? How was the likeness discovered?

6. Explain and pronounce: Titan, Titanic, chaotic, toasts, benign, benignant, harbingers, vista, epaulets, truculent, physiognomy, philanthropist. Where is the home of Washington?

7. Which is the most interesting piece in your Reader? The most amusing? The most humorous? The least bit tiresome? The most gruesome? The most conducive to patriotism? The nearest approach to a fairy story? The most pathetic? etc., etc.

8. Write a few lines on the Spectator. Mention other famous English newspapers in Queen Anne's time. In our own?

9. Name some of the whimsical fardels carried by the people on Jupiter's plain. What did they do with them? What was the result of the exchange? What is the moral of the story?

10. How would you recognize Fancy at a carnival or masquerade? Patience? Peter or the Aga? Polly's uncle?

11. Comment on the incongruity of Peter's presents for his sister? What became of these presents? Why did Peter stay away from home for so long?

12. Explain almond-comfits; note or sovereign; indigo planter; rich as a nabob.

13. Who were my garden acquaintances? To whom does the "my" refer? How many are your garden acquaintances? From the title what might one suppose the story to be about? Compare "The Kentucky Cardinal," "Black Beauty," "Beautiful Joe," Have these names any advantage over such names as "Brute Neighbors," etc? Give reasons.

14. Who said—"What's in a name?" Finish the quotation. Do you agree? Who said—"Birds in their little nests agree." Is this true? Explain—"They grew so wonted."

15. Who was Aesop? Emerson? Dr. Johnson? Ovid? Captain Kidd?

16. Bird-nesting is called—what ology? The study of birds? Animals? The human body? Stars? And plants etc., are called by what dignified names?

17. "It is our custom on every Christmas Eve to read one of Dickens' Christmas stories." Whose custom was it? Is it yours? What poem of Milton's is particularly appropriate for Christmas Eve? Name some of Dickens' Christmas stories—which one did they read?

18. Explain sedan, palanquin, bungalow, chibouk, groined roof, swart attendant, swingeing cold, cruel mysteries, nepotism. Where is the House of the Seven Gables? Who wrote about it?

19. What changes did the uncle make? How did this effect Polly? Her husband?

20. Which of the pieces in your Reader are told in the first person? How do you like this style of narrative? Give reasons for and against. Dickens uses it in—. Thackeray in—. Scott in—. Fill in the blanks and mention other examples. Are these books favorites with the general public?

21. Give the duration of the storm. Other storms in literature or real life. Compare this one with those you have mentioned.

22. Explain "Covent Garden;" "box-seat on the mail;" "Great Mogul;" "The ship was in the Roads." How could those on shore tell where the schooner was from?

23. How did the war in America, at the time of Braddock's defeat, differ from the war in Europe? Account for Braddock's defeat. What did this defeat entail upon the provinces? Why?

24. What part did George Washington play in this defeat in the Ohio Valley? Where was Crown Point? Du Quesne?

25. By what act did Thanase diminish his mother's comfort and his father's hope? What might one have supposed he would do?

29. Explain conscript, dragoon, centaur, caleche, creole.

27. How old was Josephine when she began to move in society? How about the girls of to-day? Who was a born lover? From the short extract here given one would suppose the hero of "Carancro" to be—. The villain? The heroine?

28. What does "Walden" mean? Both the "Escape of Roy Roy" and part of "Brute Neighbors" are in the Sixth Grade Reader. Account for their appearing twice on your school course.

29. Which do you prefer "My Garden Acquaintance" or "Brute Neighbors? Give reasons for your answer. Which contains the most humor? The most information?

30. How did Rob Roy escape? How much was offered to the one who secured him? What do you think of Rob's persuasive powers? What are the chances that Ewan escaped? Give Rob Roy's whole name. Why Roy?

31. How much is a guinea? Is there such a coin in use at the present time? What was the "event of the search?" What was the name of the servant of Francis Osbaldistone? Comment.

32. Write notes on Wauchope and Kitchener. Why *Chinese* Gordon? What other heroes figure in African History?

33. Explain backsheesh-hunters; Dead March in Saul; Khartum; R. N.; A. D. C.; K. R. R.

34. Describe briefly the memorial service in Gordon's garden when he was buried "after the manner of his race."

COLLEGE CLOSINGS.

Kings College.

The Encaenia which marked the close of the one hundred and twenty-third academical year of King's College, Windsor, was of more than usual interest, and signs of renewed life and vigor in the ancient university were seen in all directions. The weather was all that could be desired, and there was a large attendance of the university and others, including nearly fifty of the clergy of the three provinces who had come to be present at the Lectures for Clergy, which were held from May 2 to 6.

These Clergy Lectures were a new experiment, but were so highly appreciated that those attending them expressed an unanimous wish to have a similar course provided next year. About forty of the clergy were quartered in the College building, many of the students voluntarily giving up their rooms to them. They had their meals with the students in Commons Hall, and attended the chapel services and thus were enabled to see something of college life as it is.

The Rev. R. A. Armstrong, of St. John, gave an illustrated lecture on Egypt on the evening of Friday, May 2nd, which was open to the public and was much enjoyed. The first lecture of the course was by Canon Vroom on Saturday at 10 a. m., on Liturgical Principles, treating of the Biblical idea of worship and tracing the development of liturgical worship in the early church. Canon Sisam, of Moncton, followed with an able review of modern Oxford theology as set forth in a recent book entitled "Foundations," by seven Oxford men; and after him came Professor Hunt, with the first of a course of three exegetical lectures on the Book of the Revelation. In the afternoon the Rev. W. S. H. Morris delivered the first of three scholarly and deeply interesting lectures on "The Taking of the Manhood into God," and in the evening Canon Gould, Secretary of the Missionary Society of the Canadian Church, lectured on the "Difficulties and Prospects of Christian Work in the Countries under Turkish Rule."

On Sunday, in addition to the regular services in the College Chapel and the Parish Church, there was a missionary meeting for men in the Opera House, which was well attended, and at which addresses were delivered by Canon Lloyd of All Saints' Cathedral, Halifax, and Dr. Gould.

Drs. Vroom and Hunt and Mr. Morris continued their lectures on Monday and Tuesday and in addition to these the Rev. C. W. Vernon, of Halifax, gave a very carefully prepared and valuable lecture on the Higher Criticism of the Old Testament, on Monday, and on Tuesday the Rev. R. F. Dixon read an excellent paper on Orders and Unity, and in the evening a conference was held on Parochial Missions, at which the chair was taken by the Bishop of Nova Scotia, and the Bishop of Fredericton was the chief speaker.

Monday evening the annual meeting of the Haliburton Club was held at the College Hall. This society was founded and incorporated in 1884, its object being the cultivation of Canadian literature and the collecting of Canadian works, bearing on Canadian history and literature.

Prominent contributors to the programme were Bishop Richardson, Principal Sexton of the Halifax "Tech;" Canon Llwyd, Rev. Dr. Martell, H. P. Scott, Dr. Soloan, of the N. S. Normal School, Canon Smithers and Rev. C. F. Wiggins. "Some Duties of the University Graduates to the Community," was the subject of Professor Sexton's address. Dr. Soloan's scholarly article on Charles Heavysege's "Saul" was much appreciated. Mr. H. P. Scott gave a very interesting paper on R. W. Service.

The match for the Cogswell Cricket Prize was played on Tuesday between the "Three Elms Cricket Club," which has been in existence since 1850, and a team consisting for the most part of visiting clergy. The result was in favor of the visitors and the bats were won by the Rev. W. R. Martell.

The Annual Meeting of the Alumni Association was held on Wednesday morning, the President, Judge Forbes, of Liverpool, in the chair. The report of the Executive Committee referred to the loss the Society had sustained by the death of its secretary-treasurer, R. J. Wilson. W. L. Payzant was appointed treasurer and Rev. C. W. Vernon secretary, in Mr. Wilson's place. Attention was called to the new buildings and the improvements in the old buildings, the great increase in the number of students which is larger than ever before, and the fitting up the buildings of the Collegiate School. A new prize of \$50.00 was established, open to students entering College from the Collegiate School, St. Peter's School, Charlottetown, Rothesay Collegiate School and the Church School for Girls. Dr. Trenaman and the Rev. Messrs. C. W. Vernon and G. M. Ambrose were elected to fill vacancies on the Executive Committee, and Dr. M. A. B. Smith, Walter Allison and Rev. G. M. Ambrose were elected to the Board of Governors. The sum of \$50.00 was voted towards planting new trees in the College Woods.

The Alexandra Society of women workers for the College, which has for ten years paid the salary of one professor, held a successful meeting on Wednesday afternoon, and after an address from Canon Smithers, of Fredericton, it was decided to start a fund to furnish a residence for women students, and the sum of \$200.00 was raised at the meeting.

Thursday, the day of Encaenia, dawned bright and clear, and the morning trains brought a number of visitors. Holy Communion was celebrated in the College Chapel at 7.30 by the Bishop of Nova Scotia, assisted by President Powell, and at 10 o'clock the academical procession formed in

front of the College, consisting of the boys of the School in uniform, the undergraduates in order, bachelors and masters in their varied hoods, and doctors in scarlet robes, with the Chancellor (Chief Justice Sir Charles Townshend) bringing up the rear, and marched to the Parish Church, where a full choral service was held, Drs. Vroom and Hunt taking the prayers and Professor Harley and the rector, Dr. Martell, the Lessons. The preacher was the Rev. Robert Johnston, of Philadelphia, and the benediction was pronounced by the Bishop of Nova Scotia.

Convocation met at 2 p. m. in the Convocation Hall, which was filled with a large audience, members of convocation in their robes occupying the platform. The Chancellor presided, being supported by the Bishops of Nova Scotia and Fredericton, the Vice Chancellor (Dr. Powell) and others. The candidates for honorary degrees were the Very Rev. H. P. Almon Abbott, Dean of Niagara, who was admitted to the degree of D.D., John Hamilton, Esq., of Quebec, Chancellor of the University of Bishops' Colleges, Lennoxville, the Rev. E. H. Ball, of Tangier, one of the senior clergy of the Diocese, and the Rev. Robert Johnston, of Philadelphia, who were admitted to the degree of D. C. L. These were all presented in sonorous Latin by the Public Orator, Dr. Bambrick, rector of Yarmouth.

Next followed the degrees in course, as below, the candidates for degrees in Arts being presented by Dr. Vroom, and those in Law by Dr. Alward, Dean of the Law School.

M.A.—W. C. Morris, B.A., C. H. Boulden, B.A., B.A. (ad eundem) and M.A.—The Rev. H. L. Haslam, B.A., Toronto.

B.A.—John R. H. Harley, Arthur L. Collett, Thomas Parker, J. Robinson Belyea, Miss Norah K. Porter.

B.C.L. (in absentia).—John D. Falconbridge, LL.B., J. Ogle Carss, LL.B.; Bernard Rose, LL.B.

B.C.L.—Miles B. Innis, Urban J. Sweeney.

The valedictory was delivered by Thomas Parker, B.A., who reviewed the events of the past four years, dwelling with satisfaction on the great success which had attended the football and hockey teams during the past year.

The President then announced the prizes for the year:

Governor-General's Medal — Mr. John Harley, Windsor.

Bishop Binney Prize — Mr. C. A. Simpson, Charlottetown.

Almon Welsford Testimonial — Mr. Sidney Jones, Springhill.

President's Reading Prizes — 1st, Mr. E. Jukes, Trenton, N. S., 2nd, Mr. A. W. Cunningham, Halifax.

McDonald Prizes for General Biblical Knowledge — 1st, Mr. J. H. A. Holmes, Picton, Ont.; 2nd, Mr. D. M. Wiswell, Halifax.

Crockett Prize for Greek — Mr. D. M. Wiswell, Halifax.

The Rev. H. A. Cody, M.A., of St. John, then delivered the Alumni Oration, which was clothed in graceful and poetic language and dealt with "The Wonder-ball of Life," and the necessity of vision, action and production for those who would make a success of their lives.

Brief addresses followed, by the recipients of honorary degrees, after which the President, Dr. Powell, gave a powerful address on the principles of university education. The proceedings closed with the singing of "God Save the King."

University of New Brunswick.

The Centennial exercises of the University of New Brunswick were held this year on the fifteenth of May under ideal weather conditions and with a large attendance of graduates and friends of higher education.

Lieutenant-Governor Wood presided, and members of the University Senate and of the Alumni and a number of prominent personages were seated with His Honor and Chancellor Jones upon the platform.

There were thirty-nine members in the graduating class — one of the largest in the history of the institution. They received degrees as follows:— Seventeen in arts, sixteen in civil engineering, three in electrical engineering and three in forestry.

The Douglas Gold Medal for the best essay on the subject "The Development and Value of the Commission as a means of the State's Regulation of Trade and Industry" was awarded to George Brown Carpenter, of Cambridge, Queens County; the Governor General's Gold Medal for the highest standing in the distinction and honour courses in Natural Science and Chemistry during the senior year was won by John Clarence Hanson, of Fredericton; the Kitchen Silver Medal for highest standing in the fourth year of Civil Engineering course, by Frederick Simeon Jones, Queens County; the Montgomery-Campbell prize for highest standing in the Latin and Greek of the fourth year by Arthur Norwood Carter, of Rothesay, who was also the winner of Hon. L. J. Tweedie's prize of fifty dollars for the highest standing in five ordinary subjects of the senior year. The City of Fredericton Gold Medal for the best thesis on the subject "The Professional Forester and What he May Accomplish for New Brunswick," was won by George Payson Melrose, St. John; the Alumnae Scholarship of thirty dollars for the best standing among the young lady students of sophomore year was won by Lowella Bernice McNaughton, of Moncton; the William Crocket Memorial Scholarship of one hundred dollars in gold, which had been established during the year by Dr. A. P. Crocket, of St. John, in honor of his father, Dr. William Crocket, of Fredericton, formerly Chief Superintendent of Education and Principal of the Provincial Normal School, was presented to Murray McCheyne Baird of Freder-

ericton, for the highest standing in Latin and Greek in the freshman year; the new prize this year of twenty-five dollars, donated by Dr. Thomas Walker, for the best term work in English of the freshman year, was won by Melvin B. Dunn, of Harcourt, Kent County; the Alumni Gold Medal was won by John C. Hanson, of Fredericton; the Brydone-Jack Scholarship by Samuel R. Weston. Honorary Degree of Doctor of Laws was conferred on Premier Fleming, Dr. Thomas Walker, and J. D. Phinney, K.C.; the degree of B.Sc. in Electrical Engineering was conferred in absentia upon W. Arnold Murray, who was unable to be present at the encoenia.

The following degrees were also granted:— Degree of M.A. in Course, William H. Morrow, Sydney B. Smith, Isabelle A. F. Thomas. Degree of M.Sc. in Course, Clarence McN. Steeves.

The subject of English Essays in competition next year for the Douglas Gold Medal is "The Undeveloped Resources of New Brunswick."

The City of Fredericton Gold Medal next year will be awarded for the highest terminal marks in the Senior year in the subject "Public Water Supplies and Sewerage."

The passage of English prose to be translated into Latin in competition for the Alumni Gold Medal in 1914 will be Meyer's History of Greece, chapter twenty, from beginning to end of words "While the expedition was away."

A scheme is in progress by which affiliation with McGill University for the Degree of Doctor of Medicine will be arranged, so that students may take the necessary first year instructions at the University of New Brunswick. Affiliation for the Law Course with Dalhousie University has been perfected.

The address in praise of the founders was delivered by Professor John Stephens, M.A., professor of Mechanical Engineering and Drawing. Mr. Justice Barry delivered the address to the graduating class; the Alumni oration was delivered by Dr. H. S. Bridges, and the valedictory by Mr. Arthur N. Carter, who has been recently appointed Rhodes scholar by the University, and will go to Oxford in September next to continue his studies there.

Dalhousie College.

The convocation ceremonies of Dalhousie were noticed in the May number of the REVIEW. An enthusiastic graduate supplies the following additional notes:

There are some who assert that old Sol is a Dalhousian. Whether this be true or not, he, at least, has been present at our Convocation on the last three or four occasions. Perhaps his attendance this year was due either to the fact that Dalhousie was celebrating its jubilee (1863-1913), or that he wished to add his contribution to those of the many who have contributed to the 1912-13 Forward Movement.

The ceremonies took place on April 24th, in the Academy of Music, as is usual. The graduating classes, though small, when compared with those of former years, made up in quality what they lacked in quantity.

After prayers by Ex-President Forrest, President Mackenzie gave his address. It was one full of hope and promise. He told of the raising of \$500,000 during the year that had passed. This had made further expansion possible and heightened the interest of the citizens of Halifax in the welfare of the institution. The new Dalhousie at Studley was now a reality, and only a few endowments, bequests or legacies from the philanthropic rich were needed to complete the work.

The graduating classes in Arts, Science, Law, Medicine and Dentistry then had their respective degrees conferred upon them, with all the rights and privileges appertaining thereto. Of these, thirty-three graduates received their B.A. degrees, twelve their LL.B., nine their M.B.C.M., four their B.Sc., and one his D.D.S. Three Master's degrees were also conferred.

Notable among the speeches delivered was that of Rev. Dr. Mackintosh, of Edinburgh. Dr. Mackintosh had charmed the ears of many Halifax audiences during that week, but never was he heard to better advantage. His theme was the debt the Canadian graduate owes to the Old Country, and vice versa, the obligation of Old Country graduates to Canadians. Other speakers were Rev. Canon Llwyd, vicar of All Saints Cathedral, and Mr. Geo. S. Campbell, the Chairman of the Dalhousie Board of Governors.

St. Francis Xavier University.

The Commencement Exercises of the University of St. Francis Xavier took place in College Hall on Tuesday, May 13th, with His Lordship Bishop Morrison presiding. A good programme was carried out and the following prizes were awarded: Gold Medal for highest aggregate in freshman year. This prize was equally merited by Archibald Wilkie, Antigonish, and Michael McCabe, Newcastle, N. B.; Gold Medal for Sophomore year to Vincent MacNeil, Big Pond, C. B.; Gold Medal, junior year, to A. L. McDonald, Port Hood, C. B.; Gold Medal, senior year, to J. D. Keane, Newcastle, N. B.; ten dollars in gold for best paper in Zoology to W. F. Chisholm, Cambridge, Mass.; Gold prize for best paper, Sophomore English, to Vincent MacNeil; Gold prize for highest aggregate, Freshman Latin, to Edmund Fitzgerald, St. John, N. B.; Special prize for best essay on "The Future of Canada," to W. F. Lane, B.A., Bayfield, N. B.

The degrees were conferred as follows:— D.Lit. (Honoris Causa), Alexander Fraser, LL.D., F.S.A. Scot, Provincial Archivist, Toronto, Ontario; M.A. (Honoris Causa), Thomas Hanrahan Esq., Superintendent of Education, member of C.H.E., Newfoundland, Harbor Grace; M.A. (Examination

and Thesis), W. F. Lane, B.A., Bayfield, N. B.; D. L. Dwyer, St. Stephen, N. B.

Nine graduates received the B. A. degree.

After the distributing of prizes and conferring of degrees an excellent address on "The Future of Canada" was delivered by Mr. W. F. Lane, M.A., of Bayfield, N. B. Eloquent addresses were also delivered by Dr. Fraser of Toronto and Bishop Morrison, Chancellor of the University. His Lordship congratulated the graduates on the evidence of study and scholarship shown in their addresses and reminded them of their duties and responsibilities after leaving college. The baccalaureate sermon was preached at the cathedral at the close of the exercises by Rev. A. McD. Thompson, D.D.

Mount Allison University.

The closing exercises of Mount Allison this year were of more than ordinary interest, for not only was the graduating class the largest in its history, but it was also the jubilee celebration of its first graduating class of which Rev. Dr. Howard Sprague, dean of Theology of Mt. Allison, and His Honor Lieutenant Governor Josiah Wood, were the members. These two gentlemen graduated from Mount Allison in 1863. Both their careers have been full of the most glorious kind of success, and now that they have come to the fiftieth anniversary of their graduation they are found in labors most abundant. Students past and present wish them new lease of life and usefulness.

Lieutenant-Governor Wood and Dr. Sprague who were on the platform were presented with addresses — that to His Honor Lieutenant-Governor Wood by Rev. A. D. Morton, D.D., and that to Rev. Dr. Sprague by Dr. Allison. Governor Wood, in his reply, after paying a glowing tribute to Dr. Charles F. Allison, founder of the institutions at Sackville, and to others who were connected with its early history, referred to the advantages enjoyed by the students of the present day over those available in the days when he was attending the University. Rev. Dr. Sprague, in replying, said:—"Fifty years! What a half century they have made. For truth and facts and laws of nature discovered and used for the material advantage and social good of man, no fifty years since time began has equalled that of which we speak to-day." The speaker, after reviewing in glowing language his college days and paying high tribute to his teachers, closed with the following:—"I must congratulate the University and all who have played a part in its history on the steady development of fifty years under successive leaders, all capable, wise, energetic and faithful. I rejoice that the magnificent progress under Pickard, Inch and Allison is crowned by the success of the endowment movement under President Borden." This movement is a campaign for the raising of \$250,000 as an endowment fund. This amount

has nearly all been subscribed, and the success of the movement seems assured. Sunday morning the annual sermon before the Theological Union was preached in Sackville Methodist Church by Rev. H. E. Thomas, St. John. Subject, "The Bible the Word of God." The union meeting of the Y. M. C. A. and Y. W. C. A. was addressed by Mr. George W. Beck, Truro, N. S., who took for his subject "What is the Best Thing in a Man's Life?" The Charles Fawcett Memorial Hall was taxed to its utmost capacity on Sunday night to hear the baccalaureate sermon, subject, "The Treasures of Knowledge," by Rev. R. P. Bowles, M.A., B.D., Chancellor of Victoria University, Toronto.

The University Convocation was held in Fawcett Hall on Wednesday evening. The programme included the conferring of degrees, an excellent address by H. M. MacKay, B.A., B.Sc., Professor of Civil Engineering in McGill University, brief addresses by Dr. Allison, ex-president of the University and by Dr. James Palmer, principal of Mt. Allison Academy. The degree of Bachelor of Arts was conferred on the members of the graduating class.

M.A. (in Course) — Norman Milligan Guy, Newfoundland.

LL.D.—Rev. R. P. Bowles, M.A., D.D., Toronto; Snowden Dunn Scott, M.A., Vancouver B.C.; James M. Palmer, M.A., Sackville.

D.D.—Rev. A. M. Sanford, M.A., New Westminster, B. C.

Certificates were given to the graduates in science and in theology. The Alumni honor prize for the highest average throughout the entire course was given to Miss Mary A. Colpitts, Point de Bute, N. B., who was also the winner of the Sheffield Mathematical Scholarship of \$60. The valedictory address was delivered by Orland R. Atkinson, Sussex, president of the Senior Class, and the successful leader of the debating team. In the Theological department Herbert T. Gornall, London, England, was the winner of the Honorary Life Membership in the Theological Union.

The anniversary exercises of the Ladies' College provided a programme of much interest, including instrumental and vocal music, essays and the conferring of degrees and certificates. The skilful rendering of the musical selections by Miss Grace Farquhar, of Germantown, N. S.; Miss Elsie Tait, of St. John's, Newfoundland; Miss Nan Clarke, of Bear River, N. S.; and Miss Elva Nicholson, of St. Stephen, N. B., were especially well received. The graduates as Mistresses of Liberal Arts are Miss Helen Seelye Clark, St. George, N. B.; Kathleen Allison Elderkin, Parrsboro, N. S.; Amy Gertrude Stevenson, St. John's, Newfoundland.

Owens' Museum of Fine Arts, which is in charge of Professor Hammond, was opened to the public, who were thereby enabled to see the variety and excellence of the work of the several departments, including china painting and leather, brass, copper

and wood painting and sketching. Several of the students have done excellent work in this department. Among them are Miss Dora M. Hewson; of Amherst; Miss Gwendolyn Mews, of St. John's, Newfoundland; Miss Marjorie Ayer, and Miss Marie DesBarres, of Sackville, N. B., and Miss Nellie Williams, of St. John.

The Academy and Commercial College, with Dr. James Palmer as principal, had this year an enrolment of 192 students. There were eleven matriculants to the University, thirty-two graduates in shorthand and typewriting, and several graduates in bookkeeping and penmanship.

The Alumni Society at the annual meeting elected W. B. Tennant, president, and Professor Tweedie, secretary-treasurer; and the Alumnae Society have Mrs. J. Heartz Bell, president, and Mrs. B. C. Borden, Sackville, secretary-treasurer. The graduating class chose officers for the next five years: H. W. Outerbridge, B.A., president; Augusta Daniel, B.A., vice-president; C. G. Mosher, B.A., secretary-treasurer.

Acadia University.

The last week in May witnessed the Seventy-Fifth Anniversary of Acadia College. In great numbers the people came from various quarters to share in the interesting events of the time. The Baccalaureate sermon was preached by Dr. B. W. Lockhart, of the First Congregational Church of Manchester, New Hampshire. Upon the platform with him on that occasion was Dr. J. A. Faulkner, Professor of Historical Theology in Drew Theological Seminary, a Methodist institution in Madison, New Jersey. Both these gentlemen are natives of Kings Co., N. S., and graduated from Acadia in 1878.

Acadia's past year has been, in the different departments, one of activity and progress. Rhodes Memorial Hall, a Manual Training building, was completed and opened for use early in the College year. The gift at the previous commencement of a new observatory from the Class of 1912, was followed up by the Dominion Government in more fully equipping the meteorological station already established here, so that at present this station is one of the best equipped in Canada. The enrollment of students for the year just finished was two hundred and forty in the college, one hundred and eighty-four in the Boy's Academy and two hundred and eighty-four in the Ladies' Seminary. From the College thirty-two graduated in Arts, five received the B.Sc. degree, seven took the M.A. in course, and seven obtained Engineering certificates. Three honorary degrees were conferred: the degree of Doctor of Divinity upon Rev. Obadiah E. Cox, of New York, and also upon Rev. Elias W. Kelly, Principal of Rangoon Baptist College, Burmah; and the degree of Doctor of Science upon Edward E. Prince, who is connected with the Dominion public service at Ottawa.

Sixty-three young people finished courses in the Academy and thirty-four in the Seminary.

Urgent appeals are being made to the Board of Governors to erect for the Seminary a much-needed Fine Arts building, and also to rear for the Academy a class-room building thoroughly up-to-date in its character. A fireproof library building is required to ensure the safety of the valuable and rapidly-growing library; and a new residence for college women who come in the near future. Money continues to be given to the institutions, so that the rearing of all these cannot be very far off. Hon. Nathaniel Curry, formerly of Amherst, N. S., but now a resident of Montreal, has just offered the governors one hundred and twenty-five thousand dollars, provided Acadia's other friends come forward with a like amount. Mr. Curry had previously donated twenty-five thousand dollars. And so well assured is he of the meeting of the condition he imposes in order to secure the much larger sum that he has already paid over a substantial portion of his recent generous offer.

Dr. Tufts has for many years combined under his charge the teaching of History and Political Economy. With the College opening in the coming autumn he will confine himself to History, and a new man, Mr. A. Burpee Balcom, will fill the chair of Economic Science. And Professor Haycock will hereafter have only Geology, Chemistry being taken by a man yet to be appointed. For other departments additional men are to be chosen during the summer, so that the teaching staff for the year 1913-14 will be considerably larger than ever before. Dr. R. V. Jones, for over half a century Professor of the Greek and Latin languages at Acadia, has resigned and retired as Professor Emeritus, in the enjoyment of a pension for the remainder of his lifetime. This scholar and Christian gentleman holds a large place in the affection of hundreds of Acadia's graduates the world over, all of whom wish him a happy eventide after so long a period of faithful and gracious service in the cause of higher education.

R. Y. E.

CARLETON AND VICTORIA COUNTY TEACHERS' INSTITUTE.

More than one hundred teachers from the counties of Carleton and Victoria met in a united Institute in the Fisher Memorial school building at Woodstock, on Thursday and Friday, May 1st and 2nd.

The first session was opened at ten o'clock Thursday morning, with Principal W. T. Denham, B.A., as president and E. J. Alexander, of Hartland, secretary-treasurer.

Inspector Meagher was present, and in addressing the teachers made a strong plea for cleanliness and proper ventilation in the school-room, as most important in their influence on both teachers and

pupils. He urged that teachers and trustees co-operate in making the school surroundings pleasant and attractive to the school children.

Inspector R. P. Steeves of King's County stated that the success of an Institute depended upon the activity shown by the teachers in discussing the subjects under consideration. He emphasized the importance of the development of the reasoning and thinking powers of the pupil. Enthusiasm was very necessary in teaching. He feelingly referred to the loss the teachers and the teaching profession had sustained in the death of Drs. Hay and Brittain.

A paper on "The Very Backward Pupil," by E. J. Alexander, and papers on Nature Study in Country Schools, by Miss G. E. Long, and Nature Study in Town Schools, by Miss Mulhern, were read and followed by profitable discussions.

An address on "Making Effective Our Nature Study and Agricultural Course" was delivered by Inspector Steeves of King's County, and was followed by a brief address on agricultural subjects by H. B. Durost.

A very largely attended public meeting was held on Thursday evening when an excellent musical programme was carried out and several interesting addresses were made. The speakers were President Denham, Mayor Jones, W. B. Belyea, Chairman of the School Board; Inspector Steeves, Fletcher Peacock, Provincial Director of Manual Training; Premier Fleming, and George E. Balmain, of the School Board, and Colonel F. H. J. Dibblee. A feature of the evening's programme was the cadet corps drill, under guidance of Lieuts. Hay and Vince.

On Friday Miss C. P. Fawcett of Sackville, now of Fort Fairfield High School, gave an excellent paper on the "Teaching of Writing." Miss Fawcett would insist that pupils have good writing material. All writing should be supervised by the teacher. The copy should be put on the blackboard by the teacher in presence of the pupils. Make sure that the pupils have mastered the correct position.

The officers elected are: W. T. Denham, President, and E. J. Alexander, Secretary-treasurer.

The Institute next year will be held at Woodstock on the last two days of the school term in December.

A resolution was passed expressing deep regret at the loss, by death, of Dr. John Brittain, Professor of Natural Science in the Macdonald College at Ste. Anne de Bellevue, and Dr. G. U. Hay, Editor of the EDUCATIONAL REVIEW, men whose lives were devoted to educational work, and who were beloved and esteemed by all with whom they came in contact.

A plan to protect a country against hostile airships has been proposed in England. Captive balloons afloat high in the air are to be loaded with explosives which can be set off whenever an enemy's airship comes near them.

SOME RESULTS OF THE ABANDONMENT OF THE HUMANITIES.

The following thoughtful article signed "McR" appeared in a recent number of the *Dalhousie (University) Gazette*. The arguments advanced for the study of Latin and Greek will always remain sound. The true scientific spirit will be for their retention as studies for culture.

We read with much wonder in these intensely practical and commercial days that Lady Jane Grey was accomplished in the classics. But she was no exception. Many of her contemporaries of both sexes wrote and spoke Latin with ease and grace. Nor was this considered remarkable. The man of education in the days of Erasmus and the Reformation was in no sense a cultured gentleman, if he was not thoroughly versed in both Greek and Latin, while yet in his 'teens. All this is common knowledge to students.

When it became the fashion to write and read in the mother tongue, instead of the language of all scholars — Latin — the classic literature was still studied, still written, but within the Schools, the Universities, the Cloisters, It was no longer the means of communication between scholars of different nations — no longer the medium of conversation between statesmen, diplomats, churchmen in every centre of Europe.

To-day, despite the fierce opposition of many followers of natural and applied science, of most men of business, these superb languages of Greece and Rome are still in the curricula of many colleges and schools. The usual reason for the continuance of these studies is their culture-power, if one may so speak. It is claimed that they beget a style, a power of appreciation, a standard of excellence, a perspicuity, that is admirable. But how few, in these days, we are told, ever pass the stage of syntax, accident, and poor prose composition in these languages! How few can appreciate the beauties, the clear cut logic, the amazing perfection of Greek and Latin! And if students do not ascend to the level of proper appreciation, how much less can these studies beget a style! Appreciation precedes even proper imitation; how much more the many unconscious influences that re-appear in a student's thought and expression. While the average writer or thinker must admit this process of reasoning, the educationalist of prolonged experience may have some facts of observation that should command attention.

It was quite a general practice in Britain a couple of generations ago among educated people, to have their sons taught Latin and Greek at a very early age, as soon in many cases, as these boys began to learn to read and write their mother tongue. What were the unconscious influences and effects of such studies? At the age of ten or eleven, these lads were found to be devouring the novels of Sir Walter Scott with avidity. There seemed to be no question of understanding what they read. They scanned the pages with the eagerness and rapidity of the present day boy that sits down to a Henty story. But the boy of ten or eleven of this generation cannot read Scott's novels. He cannot read them because he cannot understand the words. He

has not the vocabulary. But worse than that, the boys of twelve, thirteen and fourteen years of age, cannot understand the language of Scott sufficiently well to intelligently read any one of his novels from cover to cover. Frequently we hear well read men of the day ask why it is our youths are reading stories so far below the level of the Waverly Novels.

Novelist and story-writers of the standard of Scott combine intense dramatic interest with the richness of historic reference, classic allusion, wealth of vocabulary. And it is just because the present day boy is ignorant of Latin and Greek, even the average Greek and Latin vocabularies of the first and second readers in these languages, that he finds such stories and novels uninteresting. Had he even a three years' acquaintance with the much abused classics, he would understand his own literature much more easily. Indeed he would save far more than the time of these years spent on classics — for he would be spared looking up the works in his own language he did not know, allusions he failed to appreciate, expression and phrases he could not understand. And most words the average man does not comprehend are from the classics. Indeed the major part of illustrations, examples, comparisons, are either from the Bible or the Humanites. If, then, the boys of to-day can bear the weight of Latin (if not Latin and Greek) without much interference with the three R's, they should do so. That they can do so, that they are doing so, in many schools and colleges, cannot be denied.

That such a procedure will save a vast time in later life is self-evident, though this is the smallest reason. If life is more than meat and drink, more than dollars and cents, if, in a word, it is the power of appreciation, then these elements that are embedded in our mother tongue are worth understanding. When a youth of seventeen asked the writer should he take an Arts course, ere he entered on the study of Law, the answer was given:—"It depends upon your standpoint. If you wish but money and success, and rapid advancement, go and study law now; if you wish development of the powers of appreciation (that can only be started on the path of development in youth), if you seek wealth of mind, if you desire to understand the history of your own times, to look into the meaning of existence, and, much more, the mystery, the awesome mystery of life, of God, the world and man, go to your Arts classes, study your classics, your philosophy, and you will in some degree better understand that religious thinker who wrote —

"Life is not meat and drink, but righteousness and peace and joy in the Holy Spirit, (may we say, in the Life of the Spirit of the Whole?)."

McR.

A 6 BY 9 RHYME.

A queer little boy who had been to school,
And was up to all sorts of tricks,
Discovered that 9 when upside down,
Would pass for the figure 6.
So when asked his age by a good old dame, the comical
youngster said,
I'm 9 when I stand on my feet like this, but 6 when I stand
on my head.
RALPH.

THE GRUESOME GIRL.

She was a very nice little girl,
 With hair that hung in one long curl,
 And she was meek as meek could be.
 But when, one day, she came to me,
 And said, "I done it," for, "I did,"
 Down from my nose my glasses slid,
 I opened very wide my eyes,—
 I did this to express surprise,—
 And said, in voice that gruesome grew,
 "This will not do."

She often folded in her lap
 Her hands, and like a saint she seemed;
 She sat for hours and hours that way,
 But when, one time, I heard her say
 "I seen it," when she should have said
 "I saw it," I just shook my head,
 Took my goloshes from the shelf,
 And in the rain, walked by myself,
 Remarking, "She's not what she seemed,
 Or what I dreamed."

Moral.

Oh little girls with yellow hair
 And angel looks, beware! beware!
 Be very careful what you say,
 Nor drive your dearest friend away
 By fearful grammar; and when you
 Don't know exactly what to do
 Or say — say nothing. No real saint
 Was ever known to say, "I ain't."

THE SPELLING MATCH.

They'd all sat down but Bess and me
 I surely thought I'd win.
 To lose on such an easy word,
 It was a shame and sin!
 We spelled the longest in the book,
 The hardest ones — right through,
 "Xylography!" and "pachyderm,"
 And "gniess" and "phthisic," too.
 I spelled "immalleability,"
 Pneumonia" — it was fun! "
 "Phlebotomy" and "zoophyte,"
 Each long and curious one
 Then teacher gave a right queer smile
 When Bess spelled "aquarelle,"
 And backward quick she turned the leaves
 And then she gave out "spell."
 I'm sure I never stopped to think
 About that "double l."
 It seemed like such an easy word;
 But one can never tell.
 "S-p-e-l," I spelled it —
 And how they all did laugh!
 And teacher said "I think, my dear
 Too easy 'twas by half."

Now Bessie was not proud nor mean
 She said "No wonder, Jane;
 For we were thinking of big words.
 You'd spell it right again."
 I'm glad that it was Bess who won,
 And not the others. Well!
 If I did miss one little word
 I showed that I could spell

THE FLAG GOES BY.

Hats off!
 Along the street there comes
 A blare of bugles, a ruffle of drums,
 A flash of color beneath the sky.
 Hats off!
 The Flag is passing by!
 Blue and crimson and white it shines
 Over the steel-tipped, ordered lines.
 Hats off!
 The colors before us fly;
 But more than The Flag is passing by.

Sea-fights and land-fights, grim and great,
 Fought to make and to save the State:
 Weary marches and sinking ships;
 Cheers of victory on dying lips;

Days of plenty and years of peace,
 March of a strong land's swift increase;
 Equal justice, right, and law;
 Stately honor and reverend awe.

Sign of a nation, great and strong,
 To ward her people from foreign wrong;
 Pride, and glory, and honor — all
 Live in the colors to stand or fall.

Hats off!
 Along the street there comes
 A blare of bugles, a ruffle of drums;
 And loyal hearts are beating high;
 Hats off!
 The Flag is passing by!

The death of our honoured friend, Dr. G. U. Hay, for so many years the able editor of the EDUCATIONAL REVIEW, will be deeply felt throughout the Maritime Provinces. He was generous in his appreciation of the services of others, forgetful of self, and never failed to give to each the full measure of honour due. The influence he exerted was as kindly and inspiring as it was far-reaching; and many discouraged teachers have been cheered and helped by his suggestions.

C. M. C.

THE BRITISH EMPIRE.

ADAPTED FROM THE MELBOURNE "SCHOOL PAPER."

1. A great American orator, Daniel Webster, once referred to the British Empire "as a power to which Rome in the height of her glory was not to be compared — a power which has dotted over the whole surface of the globe with its possessions and military posts — whose morning drum-beat, following the sun, and keeping company with the hours, circles the earth daily with one continuous and unbroken stream of its martial airs."

2. The United Kingdom of Great Britain and Ireland, or, as it may be called, Britain, is the centre of this Empire. From their island home, once divided into four parts hostile to one another, but now happily united under one crown, went forth Englishmen, Welshmen, Scotchmen, and Irishmen to people lands across the ocean. Because they and their descendants speak English, they may be called Englishmen, though some prefer the name Britons.

3. It is a well-known saying, "The sun never sets on the British Empire." It is always day in some land occupied by an English-speaking people. King George rules over about 400 millions of human beings — more than one-fourth of mankind.

4. These occupy or control about one-fifth of the land surface of the globe. The extent of this empire is happily brought before us in the following passage adapted from the Life of Queen Victoria (Nelson and Sons):—

5. "Ere the guns of the Tower of London, at noon on the King's Birthday have ceased to thunder forth the congratulations of the nation, all Canada is awake, and the West Indies are in full activity and five or six millions more, who are proud to call themselves British subjects — together, doubtless, with the eighty millions of English-speaking people in the United States — raise the song, 'God Save the King.'"

6. Its echoes have not died out in Victoria, the capital of British Columbia, before the colonists of New Zealand take up the loyal cry.

One hour later, the dawn reaches Australia and Tasmania, and there, thousands of loyal hearts are ready to respond to the prayer, 'God Save the King.'

7. Next, it is taken up by the busy merchants of Hong Kong and Singapore, and is passed on by them to the millions of India who own King George as their Emperor.

'Before the day is an hour old at Bombay, it has dawned on Mauritius.

'Next, it awakens the watchmen of Aden. Almost at the same time it flushes the mountains of Natal and Cape Colony, where there are thousands of Englishmen eager to shout, 'God Save the King!'

8. 'Anon, Malta is reached; and, one hour later, the new dawn tells the sentinels at Windsor that the joyous benediction has travelled with the sunlight from meridian to meridian, round the globe.'

9. The Union Jack — the symbol of the union which binds Englishmen all the world over — should be honored and loved by all the subjects of King George.

10. Mr. Rudyard Kipling has written a noble poem, from which the following extracts are, with his kind permission, taken:—

What is the flag of England? Winds of the world declare!

The North Wind Blew:—

The lean white bear hath seen it in the long, long arctic night,
The musk-ox knows the standard that flouts the northern light;
What is the flag of England? Ye have but my bergs to dare,
Ye have but my drifts to conquer. Go forth, for it is there.

The South Wind sighed:—

Strayed amid lonely islets, mazed amid outer keys.
I waked the palms to laughter — I tossed the scud in the breeze —

Never was isle so little, never was sea so lone,
But over the scud and the palm-tree an English flag was flown.

I have wrenched it free from the halliard to hang for a wisp on the Horn;

I have chased it north to the Lizard — ribboned and rolled and torn;

I have spread its folds o'er the dying adrift in a hopeless sea;
I have hurled it swift on the slaver, and seen the slaves set free.

The East Wind roared:—

The desert dust hath dimmed it, the flying wild-ass knows
The sacred white leopard winds it across the taintless snows.
What is the flag of England? Ye have but my sun to dare.
Ye have but my sands to travel. Go forth, for it is there.

The West Wind called:—

The dead, dumb fog hath wrapped it; the frozen dew hath kissed;

The naked stars have seen it, a fellow star in the mist.

What is the flag of England? Ye have but my breath to dare,

Ye have but my waves to conquer. Go forth, for it is there.

SUMMER.

The infinite bliss of nature
I feel in every vein,
The life and the light of summer
Blossoms in heart and brain.

—Bayard Taylor.

LEAGUE OF THE EMPIRE.

The steady growth of the League of the Empire since it was founded in 1901 has necessitated a removal to more commodious offices. The Committee have been able to acquire a large house at No. 28 Buckingham Gate, Westminster, London S. W., which will in future be not only the recognized headquarters of the League but, through the generosity of Sir Robert Lucas-Tooth, Bart., a Vice-President of the League, will also provide excellent and inexpensive club accommodation for members of the League, whether resident in England or visiting there. Since the inauguration of the League of the Empire much valuable work has been done in furthering imperial co-operation and a close association between the educational authorities and all interested in the work of education throughout the Empire has been effected. The sections into which this vast organization is divided are characterized by very vigorous growth. The Correspondence Branch, for example, numbers 26,000 members, and other interesting branches are proportionately strong. Encouraged by the great success of the Imperial Conference of Teachers' Associations convened by the League last year, and attended by over 600 delegates and members fully representing each country of the Empire, the League will now be able to carry out as far as their means will allow the practical suggestions and methods of co-operation then adopted, and to continue the valuable work of the many sections and branches.

SUMMER SCHOOL OF SCIENCE.

EDITOR OF THE EDUCATIONAL REVIEW:

The readers of the EDUCATIONAL REVIEW have already been informed of the twenty-seventh annual session of the Maritime Summer School of Science, to be held at Halifax, July 8 to 29.

Since the publication of the calendar, an addition has been made to the Botany Department, necessitated by the prospect of an even larger attendance, in this course, than in former years. We have been fortunate in securing Mr. W. H. Weston, M.A., Austin Teaching Fellow in Harvard University, who will give the second year Botany Course. As Mr. Weston is a specialist on the lower plants, it has been deemed advisable that the second year course given this summer, should be the one dealing with the structure and activities

of the lower plants, rather than one treating of the general adaptation and distribution of the higher plants as was announced in the tentative schedule in the catalogue.

In the course, representative forms of each of the groups of the lower plants will be studied in the laboratory, with the purpose of giving a fundamental knowledge of the characteristics of their structure and development.

The lecture will take up the lower plants not only from the structural standpoint, but also from the point of view of their bearing on everyday life, special emphasis being laid on their importance in agriculture, forestry, the industries, etc.

On the field trips, the plan will be to gain a familiarity with the appearance and growth of the lower plants that will enable the class to recognize the more common and important fungi, the poisonous and edible mushrooms, the sea weeds, pond scums, mosses and ferns, etc.

The aim will be to present the course in such a way as to render it useful to those who are planning to teach, and wish the aid of a knowledge of the lower forms in so doing.

The first year course as outlined in the calendar will deal with the fundamental reactions of plants. Matters will be considered in general, rather than in detail, with the idea of giving one an insight into how plants grow and reproduce; how the great variety of forms has arisen, and their relations to other natural objects. Observation, rather than theoretical considerations, will be the order of procedure, as far as possible, in the lecture room, field and laboratory.

The secretary, Mr. J. D. Seaman, Charlottetown, P. E. I., will send any general information regarding the Summer School, or the writer will be pleased to answer any inquiries concerning the botany courses.

Yours truly,

GUILFORD B. REED,

Botany Instructor,

Plant Physiology Laboratory,
Harvard University,
Cambridge, Mass.

EXAMINERS APPOINTED.

The Provincial Government has named the examiners for the present year for the New Brunswick Pharmaceutical Society. Mr. Aubrey D. Johnston, of St. Stephen, was re-appointed, and Mr. Thomas E. Powers, of St. John, was appointed in the place of the late Dr. G. U. Hay.

REVIEW'S QUESTION BOX.

F. LeD.—Would you kindly state in your next issue of the REVIEW the movements necessary for saluting the flag.

The following is from "School Flags" as approved by the Board of Education:

The pupils being assembled in the school room or school yard, the flag to be held aloft by the teacher or senior pupil in a prominent position, the military salute shall be given (bring the right hand, palm to the front, smartly to the right side of the forehead, the elbow kept well back, eyes looking to the flag; then all drop the arms together). The National Anthem may then be sung.

F. P. H.—Please give solutions of the following:

1. A person being asked the time of day replied that one-seventh of the time past noon was equal to one-quarter of the time to midnight.

Required the time.

Let the time be h hours past noon, which is $12-h$ hours to midnight

Then $\frac{h}{7} = \frac{1}{4}$ of the time past noon,
and $12-h$

———— = — of the time to midnight.

Hence h $12-h$

— = —, and, clearing of fractions,

$4h = 7(12-h)$.

$\therefore 4h = 84 - 7h \therefore 11h = 84 \therefore h = 7 \frac{7}{11}$.

Seven and seven-elevenths hours past noon is thirty-eight and two-elevenths minutes past seven.

2. A tree 98 feet high breaks off, and the top strikes the ground 84 feet from the centre of the tree at the ground. Where did the tree break?

Suppose the tree breaks m feet from the ground. Then there is formed a right-angled triangle having a base of 84 feet, a perpendicular of m feet, and an hypotenuse of $98-m$ feet.

$m^2 + (84)^2 = (98-m)^2$
 $\therefore m^2 + 7056 = 9604 - 196m + m^2$

$\therefore 196m = 9604 - 7056 = 2548 \therefore m = \frac{2548}{196} = 13$

or, the tree breaks thirteen feet from the ground

3. A level reach in a canal, 14 miles 6 furlongs long, and 48 feet broad, is kept up by a lock 30 feet long, 12 feet broad, and having a fall of 8 feet 6 inches. How many barges might pass through the lock before the water in the upper canal was lowered one inch?

The lock must fill and empty to allow a barge to pass through; that is, $80 \times 12 \times 8\frac{1}{2}$ cubic feet

of water must be drawn off the level reach to permit one barge to pass through the lock.

$80 \times 12 \times 8\frac{1}{2} = 8160$ cubic feet.

To lower the water in the upper reach of the canal one inch, there must be drawn off a quantity of water measuring $14\frac{3}{4}$ times 5,280 feet, by 48 feet, by one-twelfth of a foot; equal 311520 cubic feet.

Therefore, $311520 \div 8160 =$ the number of barges which will pass through the lock = 38; the fraction of water left over being too small a quantity to permit of another barge passing through.

P. G. McF.

A DEAR LITTLE GOOSE.

I.

While I'm in the ones I can frolic all the day
I can laugh, I can jump, I can run about and play;
But when I'm in the tens I must get up with the lark,
And sew and read and practice from early morn till dark.

II.

When I'm in the twenties, I'll be like Sister Jo;
I'll wear the sweetest dresses, and maybe, have a beau,
I'll go to balls and parties and wear my hair up high
And not a girl in all the town shall be as gay as I.

III.

When I'm in the thirties, I'll be just like Mamma
And maybe I'll be married to a splendid big Papa.
I'll cook and bake and mend and mind, and grow a little fat,
But mother is so sweet and nice, I'll not object to that.

IV.

Oh, what comes after thirty? The forties! Mercy, My!
When I grow as old as forty, I think I'll have to die.
But like enough the world won't last until we see that day,
It's so very, very, very, very, very far waay

CURRENT EVENTS.

An important step towards a solution of the difference between the Balkan allies is an agreement for a meeting of the premiers of the four Balkan states for a discussion of all the questions arising out of the war. Meanwhile a neutral zone has been established temporarily between the Greek and Bulgarian lines of occupation, and the leaders of both armies are endeavouring to avoid further conflict.

There are new threats of a rebellion in Ireland in opposition to Home Rule, and the government has seized a consignment of rifles imported from Germany.

By an agreement with Persia, the whole of Southern Persia passes into the control of Great Britain. British soldiers will guard the trade routes, and British ships will guard the waters of the Persian Gulf.

Compulsory school bathing is enforced in some of the cities of Germany. Children who cannot afford bathing suits are supplied with them by the school.

There are upwards of forty Syrian children living in Sydney,

Cape Breton; and arrangements are being made to bring them together after regular school hours and give them instruction in their mother tongue.

Fur farming is now an established business in Canada. It originated in Prince Edward Island, where black and silver foxes were first bred for their skins; but mink, otter, skunk, racoon and other fur bearing animals, it is said, may be raised with profit.

The King has conferred the honor of knighthood upon the Chief Justice of New Brunswick, who will therefore be known hereafter as Sir Frederick Barker.

There has been an increase of sixty-one millions in the population of India in the last thirty years, according to a recent official report; and there is five times as much land under cultivation there as there is in Great Britain, Canada, Australia and New Zealand altogether. The wheat crop of India alone is more than that of all the rest of the British Empire.

Six Marconi wireless receiving towers have been erected at Louisburg, in addition to the plant already in operation at Port Morien, which was not sufficient to take care of all the business offered.

The immigration from Great Britain to Canada has been larger this year than ever before. Three thousand people recently embarked at Glasgow for Canada in one day.

Captain Robert Bartlett, who was sailing master of the vessel that carried Admiral Peary on his last trip to the North, will hold the same position on the Stefansson expedition, which leaves this month for the Arctic regions. The autumn of 1916 is the time set for the return.

British, Canadian and Australian delegates visited the United States last month to take part in the deliberations of the international committee now planning for the celebration of the century of peace among the English-speaking nations. Among the proposals for a permanent memorial are the following:—A memorial bridge at Niagara Falls; another between Buffalo and Fort Erie; the preservation and repair of battlefields, forts and earthworks connected with the war. One Canadian has suggested that there be five minutes of silence, when all work shall stop simultaneously throughout Great Britain, Canada and the United States. Another suggests the removal of the United States armed vessels from the Great Lakes.

The Panama Canal is nearing completion, and that part of it near the Pacific end which is on a level with the sea has been connected with the ocean by blasting away the restraining dike.

The Danish explorer, Knud Rasmussen, has returned from his three years absence in Greenland, and will probably have found out many things in relation to the Eskimos, whose migrations and traditions were the chief objects of his investigation.

Cuba and Hayti have new presidents, both believed to be men of ability and strength, able to maintain order and lead their people in the paths of peace. The situation in Mexico is not so hopeful. There the rebels have been very successful in the North, and it is not improbable that the country may soon be divided into two republics.

A Cuban aviator has won the \$10,000 prize offered by his government by a flight from Key West to Havana.

The city of Los Angeles, California, has an aqueduct which,

with its five storage basins, is two hundred and thirty-five miles in length. The system comprises the longest aqueduct in the world, and will cost over twenty million dollars.

With brief and simple ceremonies, the keys of the captured city of Scutari were handed over by the Montenegrins to the naval commanders representing the Great Powers, and the last of the Montenegrin regiments withdrew. Scutari will probably be made the capital of the proposed independent state of Albania, the boundaries of which are to be fixed by the powers.

A treaty of peace between the Balkan Allies and Turkey was signed in London on the thirtieth of May, and the war is ended. But there is much reason to fear that another war has already begun. The Bulgarians insist upon a division of the conquered territories in accordance with the preliminary treaty between the allies; the Greeks and Servians ask for a revision of this treaty, and there have been actual engagements between the Greek and Bulgarian troops. Each country accuses the other of demanding too much of the former Turkish territory.

The war in Tripoli has been continued by the Arab tribes, and late news from that country tells of a serious defeat of the Italian forces, which took place on the sixteenth of May.

The gift of three battleships to the British navy, which was agreed to by the lower house of the Canadian parliament, has been vetoed by the senate amending the bill so as to provide that it should not come into force until after the next general election. Nothing more can be done at present; and the three ships which Canada has failed to provide must be provided by the British admiralty.

SCHOOL AND COLLEGE.

Professor L. C. Moore who is a native of Colchester County, N. S., and who is of the department of Biology, Dalhousie University, has been elected a Fellow of the Royal Society of Canada in recognition of his contributions to science. Professor Moore took honors in Dalhousie and has since taken post graduate courses in Botany at John Hopkins and at Harvard. This is a signal honor, for the membership of the Royal Society of Canada is limited to eighty. In Nova Scotia there are but five:—Mr. Justice Longley, Literature; Dr. A. H. Mackay, Scientific; Principal Mackenzie, Chemistry and Physics; Dr. Arthur Wentworth H. Eaton for Historical Research; and Professor L. C. Moore, Biology. The Royal Society of Canada was founded by Marquis of Lorne and Princess Louise, to encourage Literature and Science; and its first meeting took place at Ottawa in 1882, Sir William Dawson presiding.

Principal Rev. Dr. McKinnon and Rev. Dr. McIntosh of Pine Hill College recently sailed from Quebec for an extended trip in Europe.

J. D. Tothill, who has been in charge of the Dominion Government work for the suppression of the brown tail moth and other injurious insects, has recently received notice from the Imperial Bureau of Entomology of London, England, that he has been awarded one of the entomological scholarships granted by Andrew Carnegie. This scholarship, valued at \$700, and awarded for successful research, is the first of the kind given in Canada; and in this instance is for the purpose of enabling the possessor to pursue at Cornell

University higher research work along the lines of his special subject. Mr. Tothill, who has been granted leave of absence by the federal department of agriculture, will go to Cornell in October.

The Rev. V. A. Huard, a prominent Canadian naturalist, and curator of the museum of Natural History, and entomologist for the province of Quebec, has been elected a member of the Royal Society of Canada.

The executive of the Charlotte County Teachers' Institute, N. B., and the Committee of Management of the Washington County Teachers' Association, Maine, recently met in Calais and arranged for a joint Teachers' Convention to be held in Eastport, Maine, on Thursday and Friday of the first week in October.

Professor Gordon of the University of New Brunswick has severed his connection with that institution.

Rev. Albert Morris Sanford, B. A., B. D., a native of Nova Scotia and a graduate of Mount Allison University, N. B., has been appointed principal of the Columbian College, New Westminster, B. C.

Dr. J. B. Porter, head of the mining department of McGill, and two professors, accompanied by a party of nineteen McGill students, are visiting Cape Breton, N. S. The Sydney Post in making reference to the visit says:—"The young men are mining students, and the trip is one undertaken every year, and forms a part of the regular course in mining and metallurgy. It occupies about a month and this year includes visits to the copper and asbestos regions of Quebec, the iron mines at Bathurst, the gas wells near Moncton, the Pictou coal fields, and the steel plant and coal mines of the Dominion Steel Corporation. The Quebec and New Brunswick itinerary is completed having occupied about three weeks. The last week of the trip will be given to visits to the steel plant and some of the collieries."

By the will of the late Dr. G. U. Hay, Acadia comes into possession of his valuable scientific library.

The Nova Scotia Technical College recently closed a most successful year. There were twelve members in the graduating class who received from Principal Sexton their degrees in civil, electrical, mechanical and mining engineering. There were present at the closing exercises representatives from King's, Mount Allison, St. Francis Xavier, and Dalhousie Colleges. Brief addresses were delivered by Rev. Dr. Forrest, Rev. A. H. MacKay, President MacKenzie and Rev. Dr. Nicholson, who in their remarks spoke of the excellent scientific education afforded at this institution.

The contract for the extension of the Provincial Normal School building at Fredericton has been awarded to J. Fred Ryan, and already work has been begun. The contract calls for the extension to be ready for occupancy when the Normal School re-opens in September next. The extension will comprise a main building 100 x 77 feet with an annex 20 x 40 feet, both two stories high with a basement. The main building will have on the ground floor a hall for physical drill 40 x 80 feet and two large rooms for manual training with lumber room, office and exhibition room. The second floor will contain four large class rooms, a chemical laboratory, a rest room for the lady teachers and a private room for the principal. The heaters, the blacksmith shop and a room for use in connection with the work of the school garden will be in the basement. The foundation and basement walls will

be of cement with hollow brick walls above. The roof will be flat, covered with felt and gravel, with a narrow slope and overhanging cornice all round covered with galvanized iron.

Mr. W. A. Cowperthwaite, B. A., a teacher in the high school, Moncton, will soon leave for Winnipeg, Man., where he has accepted a position on the city school staff at a much increased salary.

The forty-second report of the Halifax School for the Blind gives an interesting account of the work accomplished there. This school is free to all children of school age in the maritime provinces and Newfoundland, the only expense is the paying of the railway fare to and from the school, and furnishing the necessary clothing. Dr. Fraser, who has been engaged in the education of the blind for more than forty years, has been most successful in his management of this school, and several of the graduates are filling important positions. That Dr. Fraser's efforts are appreciated was shown by the Nova Scotia Assembly a short time ago when he was called to the Bar of the House and publicly thanked for what he had done in the interest of the blind.

Professor James Gordon MacGregor, native of Halifax, N. S., and an eminent professor of natural philosophy at the Edinburgh University, Scotland, died recently in Edinburgh of heart failure. He was sixty years of age.

Miss Winnifred Snyder of the town of St. Stephen teaching staff has tendered her resignation to take effect at the end of June.

The following appointments have been made by the Board of Governors of Acadia University for next year: Alfred Burpee Balcom, M.A., Professor of Economics; John Frederic Sievers, M.A., Professor of German; Joseph A. Ambler, Ph.D., Professor of Chemistry; Jean S. Haley, M.A., S.B., Instructor in Library Science; Ivan S. Nqwan, B.A., B.Th., Instructor in Education. The new professors in French and Greek have not yet been selected.

Miss L. A. Wilson and Miss Etta E. DeWolfe, teachers of St. Stephen, will be members of the party of educationists from Canada and Newfoundland on the fourth annual visit to the Old Country in the "Hands Across the Seas" movement.

Mr. J. T. Hebert, B. A., principal of the grammar school, Bathurst, has accepted the position of instructor in science and French in the Fredericton High School.

William T. Smith, organist and choir master of Christ Church, Fredericton, has been appointed instructor in music at the Provincial Normal School, to succeed E. Cadwallader, B. A., who recently resigned, after thirty-seven years service.

George E. Carpenter, B. A., a member of this year's U. N. B. graduating class, after the summer holidays becomes principal of the St. Andrews grammar school to succeed William H. Morrow, M. A.

Walter Dailey of Newcastle will assume the principalship of Broadway school, Woodstock, at the re-opening of the schools in August.

Miss May Carter of Sackville has been engaged to teach grade six in the Woodstock schools after holidays.

The Board of Education has made a grant of \$100 to the Dominion Educational Association which will meet at Ottawa August 20th to 23rd. Dr. J. W. Robertson is the president. The Board of Education has been pleased to order that upon application and with certificate of leave of absence from the

. . . PLAN TO ATTEND . . .

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For full particulars write either of the Directors:

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TRURO, N. S.

school board and of attendance from the military authorities, all teachers attending military camp be paid three days' government allowance.

Miss Jessie I. Lawson has tendered her resignation as a member of the teaching staff of the St. John High School. and will conduct a private school in the city.

Miss Florence E. Robertson, of Hartland, will take a position on the staff of the St. Stephen schools.

RECENT BOOKS.

The books published by Ginn & Co. are always attractive, and generally exceedingly useful, and the new volumes that come from their press this month are quite up to their usual high standard. We heartily recommend the *Pierce Spellers* to teachers who find spelling a hard subject to teach. The suggestions to teachers are full, definite and practical, and, together with rules, exercises and well-selected lists of words, make up an excellent book. (Books I and II in one volume, 131 pages, price 25 cents. Ginn & Co., Boston.)

The Wentworth-Smith Mathematical Series is well known, and the *Academic Algebra* will no doubt meet with a gratifying reception. Some of its prominent features are the clear treatment of negative quantities; the correlation of algebra with arithmetic; the sensible way in which graphic work is introduced, and the common sense nature of the problems. (Cloth, with diagrams, 440 pages, \$1.20. Ginn & Co., Boston.)

From the same firm come two charming readers, edited by Celia Richmond. These belong to *The World Literature Series*, intended to introduce children by means of pictures, and extracts from good books, to the special characteristics of the different nations. We have read the volume called *England and America* with pleasure. The other, entitled *Egypt, Greece and Rome*, is even more tempting, and would be an admirable supplementary reader for classes studying general history. (Ginn & Co, Boston).

The 18th Century is so important in the history of Canada that teachers will find *English History from Original Sources, 1715-1815*, of great use in throwing light upon the statements of Canadian History textbooks, and in giving fresh interest to their lessons. Every teacher should have a set of such extracts, and one can hardly do better than to choose from this series, published by Charles Black, London, at the modest price of two shillings a volume.

Messrs. Black also send a copy of the *Junior Regional Geography of the British Empire, with Its World Setting*. This is an attractive little book with clear maps and diagrams. Many illustrations, and suggestions and questions are at the end of every chapter. (200 pages, price 1s. 4d.)

The *Junior Arithmetic* published by the University Tutorial Press has already been noticed by us. The *Preliminary Arithmetic*, of the same publishers is intended for children from ten to fourteen.

Exercises in Logic, by F. C. Bartlett, supplies sets of typical problems in logic, with answers worked out, followed by

exercises of the same kind. The book may be used with any text book on the subject. For those taking logic for an examination subject it should be very useful. (University Tutorial Press, 25 High Street, London, W.C., price 2s 6d.)

The Gospel of St. Mark is edited for the use of pupils beginning the study of the New Testament. The text is that of the Authorized Version, but with emendations of modern scholars. The notes relate chiefly to matters of fact, or the meanings of words. A map and a geographical introduction are included. (University Tutorial Press, 1s.)

Contes Choisis is the title of a French reading-book containing extracts from Balzac, Souvestre, and de Musset, edited by A. R. Honan. This is one of what are called "Reform Method" French text-books, and seems to be an excellent one of its kind. It has an outline of grammar, all in French, and questions and exercises on the texts, thus making any other grammar or exercise book unnecessary. (Rivingtons, 1s. 6d.)

Messrs. Rivington have also brought out a pretty two-shilling edition of *Merimée's Colomba*. This book has the notes printed in a little pamphlet which slips inside the cover, and can be handled separately — rather an ingenious device. (Rivingtons, 34 King Street, Covent Garden, London.)

In Thompson's *Minimum Essentials* the arithmetic and language facts that are essential have been brought together, graded and tabulated in simple form for study, drill and text. These are excellent helps for busy teachers, emphasizing as they do the points that need constant drill and supplying the form that the drill should take. *Oral Test and Study Papers*, \$1.00 per package of 500 sheets. *Written test papers* 90 cents per package. (Ginn & Co., Boston.)

N. B. OFFICIAL NOTICES.

The departmental examinations, including University Matriculation and Normal School entrance, will begin at the various stations on Tuesday, July 1st next.

After the end of the present school year (July 30, 1913) all school boards will be required to provide in their schools the prescribed course of physical training.

Physical training courses will be given during the present year, as follows:

At Fredericton beginning July 8th.

At Shediac beginning July 8th.

At Halifax (Summer School) July 8th.

The usual course will be given in Military Training at Fredericton, beginning July 10th next.

"All applications for Physical and Military Training should be made to the Education Office not later than June 15th, inst."

ORDERED BY THE BOARD OF EDUCATION.

That upon application with certificates of leave of absence by the local school board, and of attendance at a Military Camp, during the school time lost, teachers so absent from their schools shall be paid not exceeding three days government allowance.

Education office,
June 2nd, 1913.

W. S. CARTER,
Chief Superintendent.



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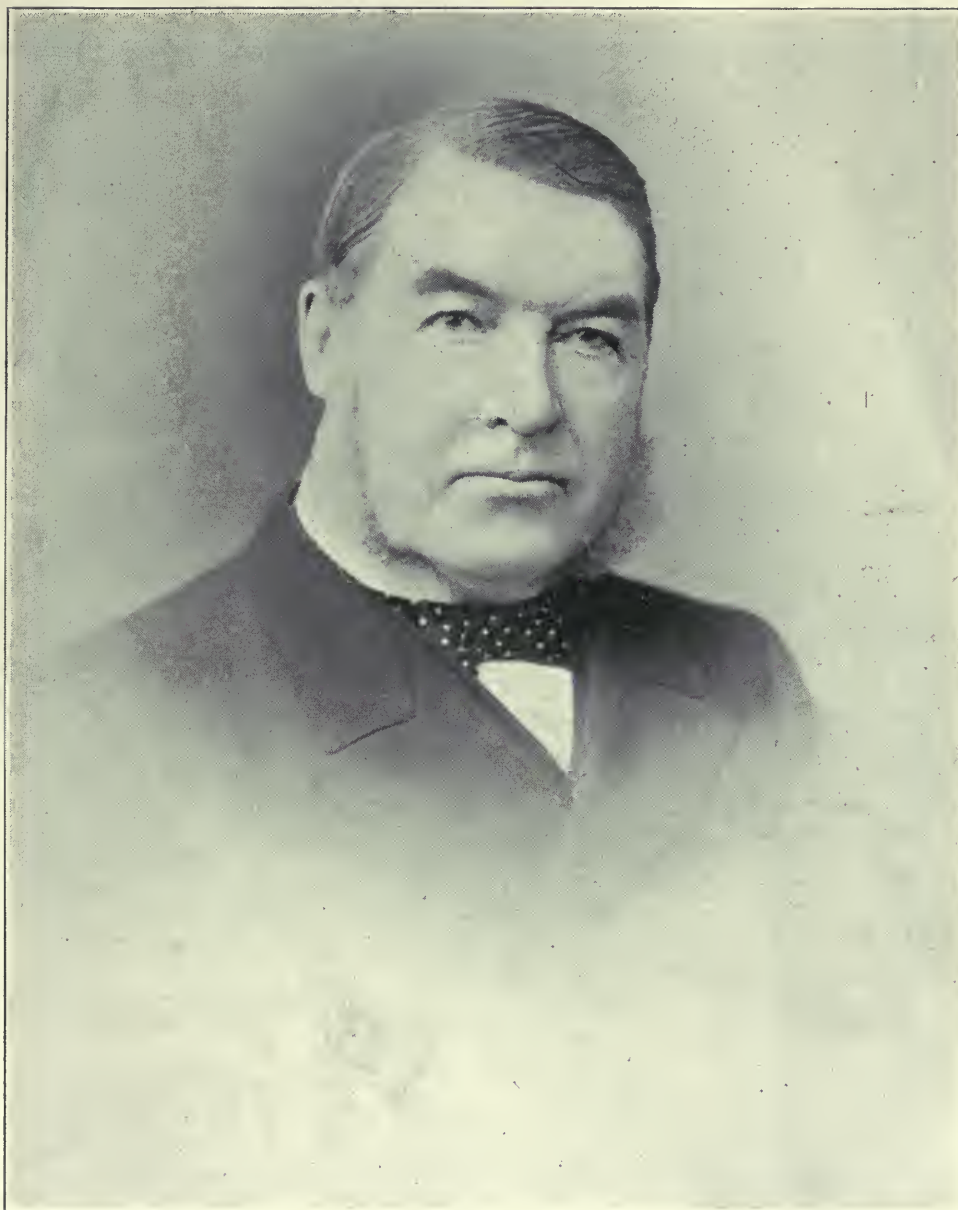
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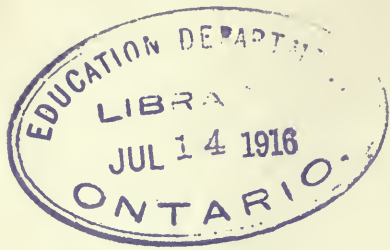
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SIR CHARLES TUPPER, BART., G. C. M. G., C. B.



The Educational Review.

Devoted to Advanced Methods of Education and General Culture

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When a change of address is ordered, both the NEW and the OLD address should be given.

If a subscriber wishes the paper to be discontinued at the expiration of the subscription, notice to that effect should be sent. Otherwise it is assumed that a continuance of the subscription is desired. It is important that subscribers attend to this in order that loss and misunderstanding may be avoided.

The number accompanying each address tells to what date the subscription is paid. Thus "315" shows that the subscription is paid to Sept. 1, 1913.

Address all correspondence to

THE EDUCATIONAL REVIEW,

St. John, N. B.

THE REVIEW AND ITS FOUNDER.

With this number the REVIEW begins a new period of its history. For twenty-six years it has been the expression of the high ideals of education held by its founder, and the medium through which he offered his friendly help to his fellow-teachers.

His influence cannot but be sadly missed by its readers. One of them, writing in condolence, spoke of Dr. Hay's "strong but gentle personality," and every one who knew him will recognize the fitness of the words.

His old pupils, and the teachers who worked under him bear witness to that rule of mingled strength and gentleness. Singleminded, unmoved by self-seeking motives, he was always firm on the side of right, and could be sternly indignant over public wrongs. But how broad-minded and sweet-tempered he was in personal matters. Some of us remember well the little laugh, and "Ah, well—" with which he would dismiss a slight or vexation that others resented for him.

Those who knew him in his daily life knew the sources of the punctilious truth and honour, the calm steadfastness, unselfishness and courtesy, that were the outstanding qualities of a most lovable character. Deep religious principle guided his life, and prompted not only exemplary devotion to outward observances of religion, and to good works, but also,

"That better portion of a good man's life
His little, nameless, unremembered acts
Of kindness and of love."

And second only to the power of religion came the calming and elevating influence of the nature which he so ardently loved and studied. To see him at his summer home at Ingleside was to recognize the truth of the picture drawn by the greatest of nature poets, of the man

"removed

From little enmities and low desires,"

And finding in Nature

"A never-failing principle of joy
And purest passion."

We who have to carry on the work of such a man may well feel the responsibility a heavy one. We are grateful to the many friends among our readers who have encouraged us by their expressions of confidence and good wishes, and we hope to justify them by trying to maintain in the REVIEW the high standards of its founder.

AN IDEAL SCHOOLMASTER.

There are various ways of judging the merits of a schoolmaster. One of the simplest and least effectual is that which may be called the extra-personal. Its method is to count the letters after his name, to glance at (not necessarily to read) the pile of learned articles he has written, and to note the names of the institutions in which he has been trained. These things are symbols, not without value, but it can hardly be questioned that they are worth less as evidences of success than the voices of generations of pupils who rise up and call him blessed.

Scattered now far and wide over the earth are hundreds of women who, in the diverse responsibilities which have come to them since their school days, bless the name of George U. Hay. In the name of those scattered hundreds, may I give the readers of the REVIEW some fragments of reminiscence?

Across the gulf of years into which many educational experiments have fallen, certain recollections stand out, clear and secure. Here was a schoolmaster who grasped and lived by certain principles which gently, quietly and persistently he worked into the life scheme of each pupil and made powerful there. Of these none was more compelling than the sacredness of the daily task. We might like it or dislike it, but there were few of us who resisted its claims. Relatively speaking, we did a good deal of work and, relatively again, we did it well. This is not the place for a history of St. John High School successes, but those who care to search will find that more than one university gives it an honourable place in the records. We are more concerned now with a different theme, that of the personal force and influence of this remarkable schoolmaster.

I have said that he taught the sacredness of the daily task. It is not to be supposed that he fell short in that other phase of the matter, that which gives life to the teacher's vocation, of making the task attractive. In literature, in history, most of all in his own most beloved subject, botany, he knew the secret of imparting his own enthusiasm and of securing in even larger and more willing measure the time and attention of his pupils. Very distinctly across the years comes the recollection of evenings when the Principal, with Mrs. Hay, who seconded his every effort, received the

girls in their home, and we read, tremulously, the essays which after long study in our literature class we had composed for this great occasion. To Dr. Hay as a teacher of botany a whole article might well be devoted. Under the stimulus of his enthusiasm, we spent hours ranging the hills and river banks of St. John in search of specimens, we crowded our rooms with presses, and gave up precious Saturday afternoons to mounting and naming our plants, and executing the fine pen and ink drawings which illustrated our note books. We were to find out later that we had but touched the fringe of a science, but I believe that no one of us regretted the time that we spent so. We had gained an insight into a wholesome pursuit which in days to come was to lead some of us afar. And meantime we had done a piece of work as well as we were able.

It was only in later years, perhaps, that we were able to appreciate some of our master's finest qualities. We comprehended dimly, if at all, the force which attached his assistants to him in such staunch loyalty, and preserved such order and earnestness throughout the school. But there were virtues which we did not miss, the unfailing patience, the tactful help, the appreciation of effort, the rare and discerning word of praise—these are things very dear to the school girl, and these our beloved master gave us ungrudgingly.

The testimony of an old pupil who cherishes a special gratitude to Dr. Hay may be cited. She came to the school a shy stranger untrained in the routine of classes and examinations. She was unprepared to pass the proper test, but in response to her earnest request she was placed in a certain class, one which almost any teacher would have pronounced too high for her. In a few months she had overtaken her classmates, almost solely through the unobtrusive guidance of the head master. Many years afterwards when they met as compatriots in the educational world to which the St. John High School had opened the door for her, she told him of what those months of training had meant. It was the consciousness that his confidence in her had placed her in that class, that spurred her to subdue nervousness and discouragement and earn her place. And with other lessons came the dawning knowledge that in the august reign of law there is a vast difference between strength and rigidity.

Spontaneously the pupils of such a master rise up and call him blessed. Of such, when their work is finished the ancient words are compact of meaning: "They rest from their labours and their works do follow them."

G. E. CAMERON.

SIR CHARLES TUPPER.

Our supplement this month is a portrait of Sir Charles Tupper, Bart., G. C. M. G., C. B., taken from a photograph which he has kindly sent for the use of the REVIEW. This picture was intended to accompany the Empire Day number in May, and the connection would have been a fitting one, as there is, perhaps, no living Canadian who has done more for the Empire than this veteran statesman.

Born in Amherst, Nova Scotia, on July 2nd, 1821, Charles Tupper was educated at Horton Academy, and the University of Edinburgh. He studied medicine, received the degree of M. D. in 1843, and returned to practise medicine in his native county.

In 1855 he was elected member for Cumberland in the Provincial Assembly, defeating the popular Joseph Howe; and this was the beginning of forty-five years of active public life.

In 1864 he became Premier of Nova Scotia, and under his guidance was passed the School Law of 1864, upon which is based the educational system of the Province.

Devoted as he was to the service of his native province, he foresaw a larger destiny for it as part of a United Canada that should grow to be a great nation. Many have heard him tell the story of the meeting at Charlottetown to discuss a union of the Maritime Provinces, the consequent Federal Conference at Quebec with wider views, and the final gathering in London out of which came the Confederation of the Dominion in 1867.

In recognition of his services in bringing about Confederation, he was made a C. B.

In the new Dominion Dr. Tupper held successively many important offices of state. He has worked consistently and vigorously to develop the resources of Canada, to make her a great nation, and to bind her closely to the Mother Country. His services to this country and to the Empire are recorded in history.

Throughout his career he has shown three essential qualities of a statesman:—large ideas,

sure foresight, and tremendous fighting power. His kindly disposition and courtesy have won for him personal popularity.

In 1886 he was made a G. C. M. G., and in 1888 a Baronet of the United Kingdom. In 1900 he withdrew from political life, and is now enjoying the well earned rest of a hale old age in the English country.

BOTANY.

L. A. DEWOLFE.

In past numbers of the REVIEW botany articles have been somewhat general, and chiefly on ecological phases of the subject. It may be wise this year to devote each article to one or two well known families of plants. I shall not attempt to take them in order of evolution, but shall choose, rather, those one is most likely to meet everywhere.

For this month the *Rosaceae* is a good family to observe. Learn, first, the characteristics of the family. Taking a flower of, say, Cinquefoil, or Wild Rose, or any other named in this article, notice the five petals and the numerous stamens *attached to what is apparently a ring of the calyx*. Below this ring the sepals are united into a bowl or saucer-shaped vessel; and above they are separate. This feature alone is enough to make one reasonable safe in saying what does and what does not belong to the Rose family. A second check in placing plants in this family is the presence of stipules. The shape, size and duration of the stipules vary with the plant; and, in themselves, furnish good topics for a few lessons.

To learn the use of stipules, one should watch leaves unfolding from the bud next spring. In a few cases, a different use may be noticed on a rainy day during the summer. Compare Wild Rose stipules with those of the Apple or Indian Pear.

Peas and Willows are among other plants with prominent stipules. How do you know they are not *Rosaceae*?

In counting the parts of the blossom, apparent trouble arises. The rose, apple—in fact, nearly all flowers of this family have five sepals. The strawberry, cinquefoils and avens, however, seem to have ten. Are all of the same size? Notice the five smaller ones alternating with the others are slightly below the real sepals. By some botanists, these are considered stipules. The belief is that all parts of a flower are modified leaves.

Sepals, then, are leaves that have assumed the work of protecting other parts of the flower. As these sepal-leaves became modified to suit their new work, their stipules also became modified. Two adjacent ones grew together to form one bract between two consecutive sepals.

After all, then, the variation in the number of sepals is only apparent. Not so, however, with the carpels. Unquestionably, their number is not uniform. In a strawberry there are many. For proof, notice the great number of seeds over the outside of the berry. In the apple and pear blossoms there are only five carpels. See the five seed-cells in an apple. How many carpels in a plum or cherry blossom?

With this variation in numbers, one problem for the early systematic botanists, doubtless, was whether or not to make separate families based on these differences. Botanical families, however, are not so much a matter of *number* as of *structure*. In some Keys the *Rosaceae* are divided into three sub-orders. These all agree, however, in the one characteristic, viz.:—the petals and stamens are attached to the "calyx-ring." If the raised ring near the base of the stamens be tasted, perhaps one might suspect its use. Why should it be placed where it is?

The Rose family gives us more of our cultivated fruits and ornamental shrubs than, possibly, any other one family. Our orchard and garden fruits nearly all belong here. Perhaps some reader will have her children make lists of garden shrubbery belonging here.

Teachers who wish, could begin at once looking for wild species. About a dozen genera may be found in any school section. A few of these genera consist of eight or nine common species; and they range from that down to a single species, as in the case of *Dalibarda* and a few others.

Several species of *Potentilla* (Cinquefoil) are still in flower. If not, some of them are easily recognized by their leaves. I suggest trying to find the Canada, Norway, Three-toothed, Shrubby, Silverweed and the Silvery Cinquefoils. The teacher on the seashore will find one of these that will not likely be found inland. Many sections might also have the Marsh Cinquefoil.

Somewhat like the Cinquefoil is the Avens (*Geum*). Four or five species belong to the Maritime Provinces. The commonest is Purple or Water Avens (Chocolate flower). The Yellow

Avens and the White Avens are also fairly common.

The blackberries, of which we have three wild species, and the raspberries are well known. Many students, however, are unable to name the dwarf raspberry (*Rubus trifloris*) when they find it. In several localities it is called Dew-berry — which is really one of the blackberries — and others call it Wine-berry. The Baked-apple of peat bogs also belongs to the genus *Rubus*.

Lady's Mantle is a troublesome weed in Yarmouth and Shelburne Counties, N. S.

Agrimony is common along the banks of brooks and rivers. Its hooked fruit reminds one of small burdock heads.

The cherries and choke-cherry are well-known.

We have several species of Wild Rose. One is a climbing species. Try to work out a few of these. The shape and size of the spines or briars will help.

The Choke-berry of swamps is not well known. The Mountain Ash is too often called dogwood.

The Spireas are worthy of acquaintance on account of the many cultivated varieties. The Hawthorns also are worth studying. I suggest starting this work now with the aid of a botanical key, and continuing it next spring and summer.

SPELLING REVIEWS.

A plan that has worked well in ungraded schools is to have every word misspelled written on the board and the list left until Friday morning. Let one of the older pupils, who writes clearly, put the words up before school each day from the list furnished by the teacher. On Friday, when spelling review time comes, let the same boy or girl erase the words from the board and give the teacher a fair copy, with the words numbered. The words may then be given out for oral or written spelling. On Monday morning, the words misspelled in review are put on the board again with a "2" after each, signifying that a double mark will be lost if they are spelled wrongly again. The deducted mark will be doubled each week, and in this way the common mistakes are hunted down and overcome. All pupils above Grade IV should take the review together, but the younger ones need not take more than the first twenty or thirty words, if the list is a long one.

All things that love the sun are out of doors;
The sky rejoices in the morning's birth.

—Wordsworth.

NATURE STUDY OF ANIMALS.

PROF. H. G. PERRY.

"There is a pleasure in the pathless wood,
 There is a rapture on the lonely shore,
 There is society where none intrudes
 By the deep sea and music in its roar."

—BYRON

The opening of another year's work in nature-study is at hand; and, as teachers, we all naturally wish to do better than ever before, to come in closer touch with nature, to learn more of her ways, to find more of her secrets and thus prepare to give the best.

In attempting to conduct this page for another year I recall many encouraging notes and suggestions from teachers throughout our constituency. I wish to thank all who helped to make whatever success attended last year's effort, and ask for a renewal of your interest, and also to welcome to our circle every teacher throughout the Maritime Provinces.

In these pages during the coming year you will find some suggestions and directions along nature-study lines, which I trust you can mould into your school work with profit and pleasure. But, every reader should remember that these articles are not intended to take the place of the personal contact with nature. We must study things, not books, or we are feeding merely on the husks.

From month to month during the coming year, we hope to present a list of subjects which will form a well rounded course for the year, taking the pupil over the prescribed work, and at the same time giving scope for extra work for the more enquiring and progressive students. With this in view a carefully selected list of subjects have been prepared suitable to the various grades. The work of the lower grades should be well done, as these comprise the great mass of our boys and girls. But something will also be attempted in the way of more advanced or High School work from time to time.

Along with this work will be found suggestions for the location, collection, and preparation of subjects for study; directions will be given when necessary for the preservation of material for study and museum specimens, and for the construction of apparatus, etc., etc.

We ask you as teachers to consider that this page of the REVIEW is your special department, to which you are urged to send in reports on conditions in your locality, *e. g.* the presence of

injurious insects, etc., as Arm Worm, Tent Caterpillar, Brown-tail Moth, etc., etc., also to send in specimens (four or five when available) of forms you wish named. All specimens that seem in any way injurious should be killed before being sent through the mails. We hope you will also make this department a question box. Questions will be given from time to time for solution. We invite your answers, and ask for your questions.

I would urge every teacher to make a collection of the injurious as well as the beneficial insects of her locality. Gradually work out the life history of each, collecting and preserving specimens of the various stages as you find them. Ten insects this year, collected, properly preserved, and named, and arranged, will tend to make nature-study popular both in your school and district. Your pupils are anxious to be busy, all they need is direction, when once under way they soon spread the interest through the community. The teacher to make the subject a success should have the work well in hand before school begins. These are vacation days, but let us as teachers make them worth while, and fill them full, notwithstanding their name.

Work for the Grades for August and first part of September;

GRADE I.—The work for this grade must in its beginnings be distinctly by itself.

Introduce your nature-study through talk about home pets and domestic animals. A few facts about the dog, and the cat, will lead to the cow, horse, sheep, hen, turkey, etc. Of what use are these animals to man? On what does each feed? What is the color of each? What kind of a coat has each? etc., etc. Develop the idea of tame and wild animals. Be content with simple statements of simple outstanding facts. These are days of adjustments for our little folk, and each one is a fitting subject for the "teacher's-nature-study."

GRADES II, III, and IV.—Review and extend the work in domestic animals. More work can be given regarding the taming of animals, Why did man tame animals? How has man benefited by taming animals? Is the process going on to-day in our Provinces? Why?

With III and IV, extend the work to insects. The housefly as a pest is a good topic. Name other insect pests. These should be treated in a general way. The country boy will find several pests on the farm. The life history of the housefly or Cabbage Butterfly should be attempted in GRADE

IV.—The Cabbage Butterfly is found in abundance. Note its manner of depositing its eggs in the nasturtium or cabbage. Watch it flitting over these plants on bright days. What is it doing? How many eggs in a bunch? Examine an egg under a hand lens, noting its markings and shape.

In Bird study the crow, robin, and bluejay are in evidence.

In more advanced classes the life history and life cycle of the Cabbage Butterfly and Housefly should be attempted.

In the study of Cabbage Butterfly learn to distinguish male from female. The male shows one round black spot on the fore wing; the female two. For the life cycle begin with the egg, which hatches into the larva, the green worm, the chief feeding stage of the animal, then its resting stage, pupal stage, in which it remains during the winter, and finally its adult or winged form, the imago.

Diagram this cycle on the board, leaving spaces for the insertion of the name of the stage at the beginning of each quadrant. This presents the life history in a striking form, and affords good subjects for composition work for older pupils.

Encourage the capture of a number of Cabbage Butterfly larvae. Place in a cage made from an empty chalk box, filled with a wire-cloth cover, supply fresh cabbage or nasturtium leaves each day, removing the old ones. Notice their feeding habits, and their passing into the pupal stage. Keep cage in a cool place for spring work. The butterfly will come out in April or early May, or much earlier if cage is kept in warm school room. Search for similar pupae on fences and buildings near turnip or cabbage fields or nasturtium beds. Is it natural for the pupae to be exposed to cold during winter? Take your hint from nature, and copy as far as possible natural conditions.

As the Housefly passes through its life cycle in about fifteen days it presents some advantages over the Cabbage Butterfly. It deposits its eggs on fresh horse manure. These hatch within a day into smooth, white conical, footless larva, called maggots. The larva feed for about a week and then pass into the pupal stage, and in a week more the adult or winged form appears. With but little care students can see all these changes, and can collect and preserve the specimens from each stage.

High School grades should study the Potato-Beetle in a similar way. Here the life cycle is

also of short duration. The larvae "soft-bugs," should be placed in a cage with the ends also of wire cloth, and the cage placed on end with about four inches of moist earth from the potato field in it. You will get best results by placing the cage in earth in the garden to the depth of four inches in order to keep the earth in it properly moist. Feed your larvae with potato leaves. If you selected large larvae they will soon burrow in the earth, and in a few weeks the adult, winged form will appear.

Another striped beetle, somewhat like the Potato-Beetle, as to color, though very much smaller, is found on pumpkin, squash and cucumber vines. It is the Striped Cucumber-Beetle.

How does it compare in activity with the Potato-Beetle? The striped Beetles are the adult or winged forms. Have you ever found the larva? In the Potato-Beetle the larvae are common and are the chief source of injury to our crops; in the Striped-Beetle the adults eat the young leaves of our cucumbers, squash, etc., and even search out the sprouting seeds and by nipping off the young sprouts destroy the plant before it is even out of the ground. Further, when the vines have grown large we often find one that begins to wilt and finally dies outright. No wound or injury is to be found in the vine above ground, but upon carefully examining the roots they are found to be pierced here and there with small holes. Examine carefully and you will detect the cause, either embedded in the root or lurking close by. They are little whitish worms about a third of an inch long, and as thick as a good sized pin; the head is of brownish black and horny, and there is a plate of same color and consistency on the last segment. These are the larvae of the Striped-Beetle. The eggs are deposited near the roots. When full grown the larvae leave the roots and pupate in the surrounding earth, and after about three weeks the adult forms appear.

Work may also be undertaken on the larva of insects infesting apples, and peas.

Directions for making apparatus:

A good poison bottle for insects is made by placing about half an ounce of potassium cyanide broken in small pieces, in a wide mouth bottle — a vaseline bottle does very well for all save the larger moths and butterflies. Moisten with water, place over it enough cotton to give a level padded surface, and force down a disk of tightly fitting sheet cork or

thick cardboard. Label "Poison" and keep out of the way of children. If bottle has a screw top, a thin sheet of cork or card should be placed in top to prevent the escape of the gas, as potassium cyanide is a deadly poison. Great caution should be exercised in allowing your pupils to have such poison bottles, as they are often left carelessly within reach of smaller children. Each student should have a collecting bottle, when the killing that is necessary may be done under the teacher's supervision. Chloroform can also be used as a killing agent. In this case use a fruit jar with some cotton in the bottom wet with a small amount of chloroform.

A collecting or insect net may be easily made by taking a piece of No. 12 spring brass, or telephone wire, three or four feet long. Bend it into round loop eight or ten inches in diameter; cross the wires, keeping the ends of equal length, and give it several firm twists continuing out to the ends of the wire. Next clamping it tightly against a small iron rod or round stick in a vise, wind the twisted end closely around the rod into a spiral. You now have a convenient frame into which any stick can be screwed for a handle. The net may be made of mosquito bar, or cheese cloth; the bag should be a little more than twice as deep as the frame is wide, so as to lap over and close well when an insect is caught.

See book notice of the Comstock Hand Book of Nature-Study.

Address all communication for this Department to H. G. PERRY, Wolfville, N. S.

As an instance of a forest pest I wish to mention that a specimen of the Spruce Budworm Moth reached me a few days ago from Albert County, N. B., through the kindness of Mr. W. Garfield White, Sussex, N. B. Mr. White reports that it has defoliated the spruce two feet from the top down and has extended its ravages over hundreds of acres. This is a serious pest, and threatens our lumber and pulpwood industries. As far as I am able to learn, this is the first report of this insect in the Maritime Provinces. It has formerly been confined to British Columbia, Quebec, and a few other localities in Western Canada. I trust all our teachers will be on the lookout for this and similar pests.

H. G. P.

The June garden is a thing of hopes and fears. The July garden is a scene of combat and accomplishment. The August garden is the ripe reward of husbandry.

Youth's Companion.

CENTENNIAL ANNIVERSARIES OF THE WAR OF 1812.

J. VROOM.

XIV.—The Battle of Lake Erie.

September 10.—The struggle for the control of Lake Erie, which was to decide the fate of Michigan, if not that of Upper Canada, came to a decisive issue in the battle that took place on the tenth of September, 1813, between a British fleet of six vessels under Captain Barclay and the enemy's fleet of nine sail under Lieutenant Perry. The difference in effective force was not quite so great as the number of ships would imply; and the result was in doubt until an unfortunate collision between the two largest vessels of the British squadron put them at a disadvantage. The direction of the wind, always an important factor in a naval engagement in those days, was in favour of the enemy. Captain Barclay himself was wounded early in the fight; and, before the battle was over, all the British officers commanding vessels and their seconds in command were either killed or so severely wounded as to be unable to keep the deck. There were but fifty experienced seaman in the crews. After stubbornly resisting for two hours and a half, four of the British ships surrendered; the other two were captured in trying to make their escape.

Perry, whose commission as a captain happened to be dated on the very day of the battle of Lake Erie, is regarded by his countrymen as the hero of the occasion. He had not only shown great ability in preparing for the contest; but, when his flag-ship was disabled and defeat seemed near, he had boarded another vessel to continue the combat, and by his own personal bravery and skill had succeeded in turning the impending defeat into the first important victory of the war.

Our neighbors across the line are holding a series of celebrations in honour of Perry's success. We can join with them in acknowledging that he deserves the honour; yet Barclay's defeat brought with it no disgrace. "Our father with one arm," as he was affectionately called by the Indians, (for he had lost an arm fighting under Nelson at the battle of Trafalgar,) was fully and honourably acquitted of blame for the loss of his fleet. He had made the best of his limited resources, and only yielded to singularly adverse circumstances and superior force. The loss of Detroit, which immediately followed, was the inevitable result.

THE FOURTH INTERNATIONAL CONGRESS ON SCHOOL HYGIENE.

International Congresses on School Hygiene have been held successively in Nuremberg, London and Paris. The Congress of 1913 is to meet at Buffalo, August 25-30.

The objects of the Congress are:

1. To bring together men and women interested in the health of school children.
2. To have papers and discussions on the subject.
3. To have exhibits representing ideals of school hygiene.
4. To publish and distribute the proceedings of the Congress.

It is hoped also that a permanent organization may be formed to carry out reforms in school hygiene.

There is a programme of two hundred and fifty papers and fifteen symposiums, discussing hygiene from the following points of view:

1. The hygiene of school buildings, grounds and materials.
2. The hygiene of school administration and schedule.
3. Medical, hygienic and sanitary supervision in schools.

There will be many special discussions, arranged by experts, including discussions on School Feeding, School Illumination, Tuberculosis among School Children, The Mentally Defective Child, etc.

Fifteen national associations have taken part in arranging plans for the Congress. Public health officers will take a prominent part in the discussions; Departments of Public Instruction are urging their officials and teachers to attend the meeting. Women's Clubs are actively at work preparing for a special conference on "Women's Work in School Hygiene."

The President of the Congress is Mr. Charles W. Eliot. Among the Vice-Presidents is Sir James Grant, M.D., K.C.M.G., Ottawa. The Congress is open to all who are interested in promoting the health and efficiency of school children.

Regular membership, entitling the holder to vote in the Congress, costs five dollars. Associate members pay two dollars and a half.

The Secretary, to whom application for membership should be made, is Dr. Thomas A. Storey, College of the City of New York.

PRINCE OF WALES COLLEGE.

The fifty-third annual commencement exercises of Prince of Wales College, Charlottetown, were held on Friday morning, May 30. The Principal's report showed that the year's work had been most encouraging. The attendance was the largest in the history of the institution, the registration being two hundred and eighty-seven, an increase of five over the preceding year. The following were the prize winners: Anderson Gold Medal (presented to the student making the highest number of marks in the third year) David McLean, Charlottetown; Governor-General's Silver Medal (to the student making the second highest number of marks in the third year) Thane Campbell, Summerside; Governor-General's Bronze Medal (to the student of the third year best fitted for teaching) George Webster, Charlottetown; the D. A. MacKinnon Prize (to the student of the third year standing highest in English) Miss Bernice Norton, Charlottetown; the Charles Lyons Prize (to the student of the second year standing highest in classics) Elmer McLeod, Hunter River; the John Caven Prize (to the student standing highest in the second year) Donald Lamont, West River; the T. A. LePage Prize (to the student standing highest in the first year) Miss Bessie Rattee, Malpeque.

The REVIEW regrets to record the close of a useful life in the death of Senator John V. Ellis, on July 10th. Among all the activities of his public-spirited career, the part of most interest to our readers is the vigorous share that he always took in educational matters. He was for many years a member of the St. John School Board, and showed great interest in the work of the schools, offering prizes, and, wherever possible, attending the closing exercises and encouraging the students by his cordial and happy words. He presented a gold medal for annual competition in English Composition at the High School.

He was a member of the Senate of the University of New Brunswick, and was active in promoting University Extension teaching in St. John. He was a director of the Horticultural Society, and for years President of the Natural History Society.

As an editor he was always ready to give prominence to educational news or discussion, and to support with his able pen the cause of teachers and students. A true friend to education, he will be greatly missed by educational people.

THE SUMMER SCHOOL OF SCIENCE.

The twenty-seventh session of the Summer School of Science closed on Tuesday, July 29th. This is the first time that the school had met in Halifax, and to its customary attractions were added those of the beautiful and interesting surroundings which that city affords. We have always thought that one great advantage of the Summer School of Science is the variety of its meeting-places. Not only do the teachers have an opportunity of seeing the scenery and resources and historic spots of different parts of the provinces, thus studying geography at first hand, but also, it cannot but be good for any community to entertain a body of hard-working, enthusiastic teachers.

More than two hundred students, a large proportion of whom were from New Brunswick, attended the school. The work done was excellent in quality, as is usual in summer schools, where the attendance is purely voluntary, and most of the students have found out, by teaching, what they want to learn.

While hard work was the rule, the students had their recreations, one of the most pleasant and novel being the band concert in the Public Gardens, given to the members of the School by the City of Halifax. They were also entertained by the Lieutenant-Governor, and by the Governors of Dalhousie College.

The meetings were held in the Technical School Building. The subjects taught were Agriculture, Physics, Chemistry, Geology, Botany, Zoology, Physiology, Literature, Elocution, Drawing, Manual Training, Physical Drill.

The class in Agriculture was the largest, but students in the other classes were equally keen. Special mention must be made of the Manual Training class, where everyone was enthusiastically busy, and the conversation was chiefly about the passing on the delights of making cardboard work, etc., to the school children.

At the closing meeting seventy-one scholarships were awarded, through the generosity of public-spirited citizens and friends of the school. Honours were shared by Miss Olivia Maxwell, of St. Stephen, N. B., and Mr. Hubert Vickery, of Yarmouth, N. S., who each carried off a \$50.00 prize.

There is a likelihood that the session of 1914 will be held in Charlottetown.

DO YOU MULTIPLY OR DIVIDE?

GERALDINE COSTER.

It has been said that all arithmetic consists merely in the four rules plus common sense. Nothing could be more obvious. We all know it. But how many of us think it worth while to teach it? And yet to the average child who has no special aptitude for mathematics, and who "never could do problems," that obvious truth is far from self-evident; and many such children cross the *pons assinorum* of arithmetic on the day when that truth comes home to them.

In the lower middle grades there are usually a considerable number of children who are good reckoners, and can multiply and divide with accuracy by enormous numbers; but set them down in front of the simplest problem and they fail utterly. It is not that they are unusually dull, but that their minds have no power to attack a problem. They cannot "get started on it," but will sit helpless before it for half an hour and then assure the teacher that they "tried for ever so long." No doubt they thought they were trying, but in all probability their minds were not working at all. How often have we not heard a dialogue somewhat as follows:—

Teacher: Now, Katie, how would you set about working example 6?

Katie (with an air of alertness): You divide.

Teacher: What do you divide?

Katie (feeling that her reply was not satisfactory): Oh! I see! You multiply—I mean—Oh! you *add*.

Katie is a good child, and is trying to please her teacher, but is she thinking? Yes, in a way she is, for is she not trying hard to find out what *the teacher wants her to say*!

To Katie one answer is just as likely to be right as another. It is merely a species of guessing contest, in which she is somewhat unreasonably expected to guess right the first time. If this amiable but otherwise deplorable attitude of mind is not corrected while Katie is young, by the time she is fifteen her intellect will be hopelessly stunted, not only so far as arithmetic is concerned, but in all her school studies. She will have developed into one of those children, alas! far too common in our schools, to whom words mean nothing, and in whose eyes question and answer have no necessary or logical connection.

In the middle grades, arithmetic is the subject that acts most directly on the newly awakened

reasoning powers, and if in this study the teacher does the reasoning and the scholar merely assents, the chief value of the subject is gone. If the teacher patiently explains over and over again the way to do certain typical problems, until at length the child grasps the idea, the child's reasoning power is exercised to the minimum rather than to the maximum degree.

It is, therefore, of the highest importance that the child should be taught independence in the matter of attacking problems, and it is often a good plan to concentrate on this for a considerable time at the beginning of the school year. Practise attacking problems in class. Never mind arriving at the answers. That may be done later, and it is incidentally very good for children to learn that the answer is not everything. Most children think that "so long as you get the answer" all is well, and that is a pernicious idea. Select, then, a considerable number of easy problems, and treat them somewhat as follows:—

I.

Problem:—A train travelling 42 miles an hour, takes 16 hours to go from Newton to Avonmouth. How far is it from Newton to Avonmouth?

What quantities are mentioned in this problem? What will be the denomination of the answer? Is it more or less than 42 miles from N. to A? What possible ways are there of making 42 bigger?

(If the class does not at once see that there are but two possible ways, question as follows:—What four ways have you learnt of dealing with numbers? Does dividing make a number bigger or smaller? Does adding..... etc., until you have elicited that only by adding or multiplying can any number be increased). Shall we add $16\frac{1}{2}$ hours to 42 miles? If adding is no use, what is left to try? Are you positive adding is no use? (Find out what the class thinks on this point, but do not express any opinion yourself. If any pupil thinks adding might be of service, let him demonstrate. If all think it of no use here, let the answer pass, and continue). How far did the train go the first hour? Have written on board:—

Train went 42 miles first hour. How far did it go the second hour? Set that down exactly under the first statement. Continue this form of question until 16 hours are accounted for on the board. Now, who can find out how far the train went in 16 hours?

After the 42's have been added, ask:—How many 2's are there in the units column? What does 16 times 2 make?

How many 4's in the tens column?

What does 16 times 4 make?

But if you say 16 *times* 2, and 16 *times* 4, that in not adding, it is ————?

Then what is the sensible way to set down that clumsy column of 42's?

Is the answer the same whether you add or multiply? Do it and see.

Try the same process with 4 times 37, and 6 times 53, etc.

Why then should we multiply in this problem rather than add?

Which do you suppose was invented first, adding or multiplying?

Show that the man who invented multiplication was a little like the man who invented printing. They both wanted to *save time*.

Can you do this sum by multiplying?

$$618 + 917 + 314.$$

Can you do this one by multiplying?

$$618 + 618 + 618 + 618.$$

What is the difference?

II

Problem:—68,179,600 pounds of pork were exported from the United States in a certain year. How many barrels of 200 lbs. each were exported?

What quantities are mentioned in this problem?

What will be the denomination of your answer?

Will there be as many as 68,179,600 barrels of pork exported?

Then will your answer be greater or less than 68,179,600.

What two ways do you know of making a number less?

What quantity have we in this problem that we could subtract from 68,179,600?

If we took 200 lbs. away, how many bbls. would it fill?

Take away 200 lbs. enough times to fill ten barrels.

Have you used up all your pork?

Could you go on subtracting 200 lbs. until you found how many bbls. 68,179,600 lbs. would fill?

Would it be a good way to solve the problem? Why not?

In what other way could you solve it?

Would the repeated subtraction give you your answer in the end?

Then what is the advantage of division?

This long method of attack should be continued until all the children have grasped the idea of it, and can themselves make the following generalisations.

1. To make a number larger we can add or multiply.

2. To make a number smaller we can subtract or divide.

3. Multiplication is merely a quick way of adding when all the addends are the same.

4. Division is merely a quick way of subtracting the same number over and over again.

When this has gone home to the whole class, it should be enough in attacking the problems to put a few general questions as follows:—

III

Problem:—A cider merchant made 12000 gallons of cider, which he put into casks holding 42 gallons each? How many casks did he fill?

What amounts have you to work with?

What will be the denomination of your answer?

Will there be as many as 12000 casks?

How can you make 12000 less?

Which shall we use, division or subtraction?

If any pupil suggests subtraction, insist on using it first, and division afterwards. There is no better way of checking foolish, parrot-like answers, than by seriously acting upon them. It makes the offender feel foolish, and also helps to teach him that he is responsible for his words. If a pupil suggests division but does not see at once what to divide by, make him use subtraction first. But as soon as he really sees what divisor to use, let him stop subtracting and divide.

So far, so good, but do not stop there. We have not reached independence so long as the teacher is putting the question. It is more than half the battle to make the child put the questions. It is very difficult to make a young child ask himself questions. It is not natural to him. So bring two children up, have your problem put on the board, and make one child question the other. But bear in mind that here it is the questioner who is learning the most, so try to give every child a turn as questioner, *especially the duller ones*. Do not put a dull child on first. If he fails he will discourage the others. Continue using this device of making the children the questioners, until you

feel that your whole class has learnt to attack a simple problem, and could do it perfectly well in your absence.

A word of warning may be useful as to the kind of problems to begin on. Select problems that require only one operation, as is the case with the three problems treated above. Problems involving two or three operations are much more difficult to attack, and should be left until the simpler ones are well understood. A problem such as :“A dealer bought 4 dozen pairs of shoes for \$96.00 and sold them at \$3.00 a pair. What was his profit?” requires three operations,

1. How many pairs of shoes were there?

2. What would they bring at \$3.00 a pair?

3. The difference between the buying and selling prices.

SUGGESTIONS FOR PRIMARY WORK.

One Way of Teaching Letters

I cut pieces of cardboard about three-quarters of an inch square, and write a letter on each side, making a complete alphabet for each child. I rule a page in the child's book in small squares, and on alternate lines write the alphabet. The children place the cardboard letters in the blank squares below the corresponding written letters. When all the squares have been put in their proper places, the child picks up each one, names it, and returns it to the box. The same plan may be used to teach figures and Roman numerals.

Different alphabets are made of different coloured card-board, and a box containing several alphabets is used for building short sentences.

A Device for Teaching New Words.

A box containing a number of small pictures of various common objects (house, box, cup, dog, etc.) pasted on card-board, is kept on a shelf. The name of each object is written or printed below it, and each child is given a picture, and required to write several short sentences about it. As they advance, new pictures are chosen, and harder words added. The pictures may be cut out of advertisements in magazines or catalogues.

For Drill in Silent Reading

A short story, or a number of short sentences, is written on a large sheet of card-board. Then another copy is written and cut up into words.

The children put the words together to form the story or sentences using the complete copy as a guide. A hectograph, or some sort of duplicator is necessary for making the copies for a large class. For a very small class, the story could be put on the black-board, and the copies to be cut up written out separately.

Reading and Manners.

In beginning to teach reading, if a child forgets the name of a letter, I say," Let me introduce you to M. Johnny this is M. Now, it is very rude to forget anyone's name, and call him by the name of another person. M will be cross if you call him, L or N."

Some materials for primary work that may be had for little or nothing are the following :

Pictures of all kinds cut from old magazines and illustrated catalogues.

Figures cut from old large calendars.

The backs of writing pads and calendars, stiff exercise book covers, old visiting and invitation cards. The latter are of a very good thickness to paste calendar numbers on.

Small card-board boxes. Wall paper pattern books, for cutting out designs. Pattern books of thin oil-cloth for making book covers.

Soda-water straws make good counting sticks, and so do matches with the heads cut off.

The paste powder that is to be had at hardware stores for about fifteen cents a pound, is convenient for pasting. It keeps well when mixed with cold water.

A hectograph, or some sort of duplicating pad, is almost a necessity. Directions for making one have been given more than once in the REVIEW and will be repeated if desired.

Ingenious teachers are asked to add to this list, and give their fellow teachers the benefit of their discoveries, through the REVIEW.

Warm noon brims full the valley's cup,
The aspen's leaves are scarce astir,
Only the little mill sends up
Its busy, never-ceasing burr. —Lowell.

A great coal area is to be opened up in the Province of Alberta. It yields anthracite coal of the best quality. The out-put in excess of what is needed in the Northwest will be shipped from the Pacific Coast, and when the Panama Canal is opened large shipments will be made to Germany.

THE HUNTER.

Ever since Robbie Evans was old enough to tease for the story of "Jack the Giant Killer", he had wanted to do something which other boys of his age could not do. He longed to do something great, which would make his family very proud of him.

When he was seven years old, Uncle Sam gave him a new, shiny, red bow-gun, and he thought the time had come for action.

He did not expect to kill a giant. Uncle Sam said there were none; that is, any wild ones.

He did think he might shoot a panther or possibly a tiger. He was sure if he looked carefully, he could find some wonderful game.

So he proudly shouldered the new bow-gun, took half a dozen of the very sharpest, pointed arrows, and started over the hill to the poplar grove.

The leaves had turned from green to yellow; and how black the old pine stumps looked through them! How strange it seemed! The rustling carpet of dried yellow leaves was not half as pretty as the soft grass and moss that covered the ground in summer, and he could not even find one bunchberry to tell of the starry white blossoms of the spring time.

If I could only kill a panther now—no, if I could only see one, of course I could kill it if I found it," thought brave Robbie.

Then as he stepped over a fallen log, an animal sprang up with a terrible hiss.

His heart stood still and he looked at the crouching animal. The eyes blazed and were fastened upon him with apparent anger or terror.

"It's just like the color Uncle Sam said that lion was out west," Robbie thought, and with a look at its coat, "and it's got a head just like a cat's. Oh, dear me!"

Poor Robbie! He was not so brave now. He stopped just long enough to see that the animal did not mean to run away, then dropped his new red bow-gun and ran.

Three things he was quite sure of—that the animal was following him closely—he could hear its feet over the dried leaves—that the way home never was so long before, and that he wanted to see his mother.

He reached the top of the hill at last. What a long time it took him to reach the orchard where John was picking apples!

"Oh, John! O mother!" he gasped, and then—"Me-i-ow! Me-i-ow!"

"Where did you find Aunt Mary's cat? She will be so glad!" cried mother.

"Is — is that her cat?" panted Robbie.

"Of course it is. There isn't another cat like him in Maine. See what a beautiful yellow coat he has. "He is the largest pussy I ever saw," said mother, as she took a basket to put him in.

"I think he is big," answered Robbie, truthfully, "but I never knew cats were that color."

His voice was beginning to be steady again.

Then he walked slowly back to find the new red bow-gun, and he sat on a fallen log a while to think about it. — Margaret Anderson, in the Boston Herald.

SOME MATERIAL FOR OPENING-DAY TESTS.

1. Make lists of trees, plants and birds. Underline those that you know by sight. Which of them are to be found near your home?

2. Make a list of the streets through which you come to school; of the shops and public buildings that you pass. Through which streets in your town do the street-cars run? What is the most interesting street? Why?

3. If you live in a seaport town, what vessels come and go regularly? To what places do they go, and what do they carry?

Punctuate and space the following:—

1. Where did you go in the holidays I went to Cape Breton How did you go By the I. C. R.

2. What did Miss Smith say to you She said I think you can do Grade V work don't you

3. What did you say I said O yes I think so

1. If you know the cost of one thing, and want to know the cost of a certain number of the same things, what do you do?

2. If you know the price of a yard of ribbon, how do you find the price of a certain number of inches.

3. (a) Sarah's mother bought $4\frac{1}{4}$ yds. of cloth for a cloak at \$1.20 a yard. How much did she pay for it?

(b) She also bought $3\frac{1}{2}$ yds. of lining at 50c. a yd., and $4\frac{1}{4}$ yds. of braid, at 20c. a yd. How much did these cost?

(c) She then bought 6 buttons at \$1.50 a doz., and 2 reels of thread, at 6c. a reel. What did she pay for them?

(d) The dressmaker charged \$5 for making the coat. What did the making and material cost?

—From The Teaching of Arithmetic, D. E. Smith.

FOR FRIDAY AFTERNOONS.

A Misunderstanding.

The little doll from China and the little China doll
Sat looking at each other in surprise;

"That you were made in China," said the first, I can't believe,

For, you see, you have such funny round blue eyes."

"But I am made of china," said the haughty little blonde;

"I don't know why my word you choose to doubt;
And for my eyes, if mine were slanted water-melon seeds
I really think I'd rather do without."

The little doll from China and the little China doll
Sat looking at each other in despair.

"Why, all the dolls in China are brunettes like me," said one.

"Oh, no; a China doll is always fair!"

"But all the dolls in China have black hair that's smooth and straight!"

"Your're wrong—a China dolly's hair is curled."
And both were right, yet both were wrong; because, you see, there are

So many kinds of china in the world!

—ST. NICHOLAS.

The Boy Who Meant To.

He meant to get up early when the air was crisp and cool,
And mow the lawn and clip the hedge before he went to school.

But he was tired and sleepy when he woke at break of day,
So said another time would do, and slipped in dreams away.

He meant to do his lessons when the house was still at night,
But in a new book lost himself and read till morning light.

At school he meant to lead his class before the term was done,
But lessons are such stupid things and boys must have some fun.

In manhood feats he likewise meant to earn some laurels, too,
But fame is such a fickle dame and picks her favorite few.

He meant to reach a wise old age, esteemed by great and low,
But wisdom's path was hard and steep and pleasures lured below.

But since he never really TRIED the things he meant to do,
That nothing ever came of them I'm not surprised, are you?

—ACADIAN RECORDER.

The Sluggard's Mistake.

Came Opportunity, one day;
He heard her timid knock,
But went on with his dozing,
Contentedly supposing
That she would pick the lock.

—CHICAGO RECORD HERALD.

Five Little Brothers

Five little brothers set out together
 To journey the livelong day,
 In a curious carriage all made of leather
 They hurried away, away!
 One big brother and three quite small,
 And one wee fellow, no size at all.

The carriage was dark and none too roomy,
 And they could not move about;
 The five little brothers grew very gloomy
 And the wee one began to pout,
 Till the biggest one whispered, "What do you say?
 Let's leave the carriage and run away!"

So out they scampered, the five together,
 And off and away they sped —
 When somebody found the carriage of leather,
 Oh, my, how she shook her head!
 'Twas her little boy's shoe, as every one knows,
 And the five little brothers were five little toes.

—ELLA WHEELER WILCOX.

An Ill Wind That Blew Somebody Good.

When little Tom went out to sail,
 He leaned too far across the rail,
 And dropped his precious glasses!
 He saw them sink, but never knew
 That, sitting far beneath the blue,
 Where wave the long sea grasses,

There wept a little fish because
 He could not go to school, he was
 So dreadfully near-sighted!
 When, looking up, through tears that rose,
 He caught those glasses on his nose,
 And wasn't he delighted!

He clapped his little fins for glee
 That so much better he could see;
 And now, fulfilled his wishes,
 His little heart is light and gay,
 For off he went that very day
 And joined a school of fishes!

—THE YOUTH'S COMPANION.

A Better Name.

When three-year-old Lawrence came home from the zoo,
 And described it to all who would hear;
 His uncle, to tease him, leaned forward and asked:
 "Can you say 'zoological,' dear?"

Poor Lawrence was silent, and squirmed in his chair,
 While his little face flushed and grew dark;
 Then, raising his eyes, he courageously said:
 "Uncle Dicky, I call it 'Noah's Ark!'"

—THE YOUTH'S COMPANION.

A Letter from a Cat

BY OLIVER HERFORD.

Mr. Editor:—

I hereby take
 My pen in paw to say,
 Can you explain a curious thing
 I found the other day?
 There is another little cat
 Who sits behind a frame,
 And looks so very much like me,
 You'd think we were the same,
 I try to make her play with me;
 Yet, when I mew and call,
 Though I see her mew in answer,
 She makes no sound at all.
 And to the dullest kitten
 Its plain enough to see
 That either I am mocking her
 Or she is mocking me.
 It makes no difference what I play
 She seems to know the game;
 For every time I look around,
 I see her do the same.
 And yet no matter though I creep
 On tiptoe lest she hear,
 Or quickly dash around the frame,
 She's sure to disappear.

SUGGESTIONS FOR SUPPLEMENTARY READING.

An easy method is the use of "piece stories." After finding some well-written, interesting newspaper story adapted to her grade, the teacher can cut it into as many pieces as there are members in the class (according to paragraphs as nearly as possible), and number the slips in order. These, of course, are given out for study, each child being required to master his portion, writing it out on paper and mastering its hard words.

When the recitation begins, the teacher calls for the readers by numbers, and as each rises to read, he hands his written copy to her, so that she may inspect it and follow the reading. Since each pupil knows only his own part of the story, and is naturally anxious to hear the rest, there is perfect attention throughout the recitation.

—*Lea McCrae in Western School Journal.*

[The story called "The Hunter," on another page of this issue, is a good one to use in this way.]

The object of their education at school is to give boys mental alertness and an eternal curiosity, and its real test is whether it leaves them always saying to themselves, Why? All the great discoveries of the world have come because some one has asked that question.

—Bishop Creighton.

USEFUL BOOKS.

[We think that the REVIEW can be of use to teachers by bringing to their notice books likely to be useful in the school-room, in a fuller and more authoritative way than is possible in our regular book notices. With this end in view, we propose to devote a column or so every month to a detailed description of some one book, pointing out its advantages for the teachers' work, and giving some suggestions how it may be used. This month Professor H. G. Perry, whose authority on the subject will be admitted, recommends Mrs. Comstocks' book on Nature-Study.]

The Handbook of Nature Study, by Anna Botsford Comstock, Lecturer in Nature Study in Cornell University, stands unique among nature study writings, both in the manner of presentation and the comprehensiveness of subjects. Its bright, cheery, vivacious style breathes of the life of out-of-doors. There is motion, interest and joy in every sentence, and whole lessons in every paragraph. No other single book on nature-study fills so many needs of the school, and contributes so much to the information of the home in so clear and practical, and in so impressive and attractive a manner.

The book has been designed to meet the needs of the least-trained teacher, and through it she may learn precisely how to present the delights of nature. The facts that the teacher should know regarding each topic are given, or suggested as the "Teacher's Story"; this is followed by a lesson in which are outlined some of the observations to be made by the children. The great merit of the book lies in the fact that the interest of both teacher and pupil is aroused, and together they seek with keen delight the open book of nature.

There are two hundred and thirty-four lessons, with about one hundred and fifty bearing directly on Agriculture.

The book is divided into four parts. Part I treats of the Teaching of Nature-Study; Part II, of Animal Life, comprising such sub-divisions as, I, Bird Study; II, Fish Study; III, Batrachian Study; IV, Reptile Study; V, Mammal Study; VI, Insect Study; VII, Other Invertebrate Animal Study. Part III, of Plant Life, comprising, besides an extended introduction, I, Wild-flower Study; II, Cultivated-Plant Study; III, Flowerless-Plant Study; IV, Tree Study; and Part IV, of Earth and Sky.

The work is published by the Comstock Publishing Company, Cornell Heights, Ithaca, New York, and is a large 8vo. volume, with an attractive

green-and-black-check cloth binding with gold lettering, comprising xviii+938 pages, and adorned with over 1,000 illustrations.

The book may be had from the publishers as follows:—

The one volume edition sells for \$3.25, postpaid, \$3.65; bound in two volumes, \$4.00, postpaid, \$4.50. These volumes are sold separately at \$2.00 each, postpaid, \$2.25. Volume I includes Parts I and II; Volume II, Parts III and IV, mentioned above.

This work should be in every school library, and in the hands of every teacher and student of nature study subjects. H. G. PERRY.

CURRENT EVENTS.

It will soon be possible to cross Central Africa by railway and the navigable rivers. The Germans have completed a line from the east coast to a point near Lake Tanganyika; and the Belgians are building lines to connect the navigable stretches of the Congo.

An American surgeon has discovered a new method of painless surgery which is believed to be of great importance. The area of operation, it is said, may be shut off from the brain for several days if necessary.

A new alloy of magnesium and aluminum will be useful where lightness is required. It has but one-third the weight of cast-iron, and a much greater tensile strength. Its power of conducting heat is fourteen times as great as that of iron.

A new telephone transmitter fits close to the mouth of the speaker and transmits the vibrations of the voice in the usual way, but allows no sound to escape into the room occupied by the speaker.

A wireless telegraph station using the Paulsen system is to be established at Newcastle, N. B. The central steel tower, which is being made in England, will be five hundred feet high; and there will be six other towers, each a hundred feet high. This station will send messages across the Atlantic to a station on the west coast of Ireland, and will form a link in an all-British service to extend around the world. The Paulsen system is the chief rival of the Marconi system, but differs from it so much that a Marconi instrument cannot receive its messages. The Marconi station in Cape Breton will still continue in use.

Exclusive of those things that are merely of transient interest, wars and rumors of wars make up the greater part of the current news of the day. The triumphs of peace are not so easily chronicled. A new invention or a new discovery may have a more important or a more lasting effect upon the future welfare of nations than a great war, and some of the most important contests are those that are not fought out on the field of battle, but are settled by diplomacy. Such events take place so quietly that they may pass unnoticed at the time. The clash of arms and the appearance of international questions that may lead to armed conflict will always demand attention.

The world or at least the English-speaking world and the nations of Europe, rejoiced when the war between

Turkey and the Balkan Allies ended in the Peace of London. Turkey-in-Europe had been reduced to a narrow strip along the sea of Marmora and the straits leading into it. Neither of the great powers of Europe could afford to see the conquered territory fall into the hands of a rival power; but it was hoped that the members of the Balkan League could agree upon dividing it among themselves. This hope has not been realized. A fierce and bloody war between the Bulgarians and their late allies over the division of the spoils has given the Turks the opportunity of re-occupying part of their lost territory, including the city of Adrianople. Roumania, which took no part in the late war, is now in active alliance with Servia and Greece, and has invaded Bulgarian territory, with the object of adding a large part of it to her own domain. The new war began with the Bulgars attacking the Greeks and Serbs at three different points along the line on the night of the twenty-ninth of June. They were driven back at all points by Greeks and Serbs, before the Turks and Roumanians commenced hostilities, and now seem to be completely crushed. It remains to be seen whether Greeks, Turks, Serbs and Roumanians can agree upon a division of territory, or will be allowed to do so.

Albania, the least civilized part of the Balkan peninsula, and, without exception, the least civilized part of Europe, is to be made a principality, probably under the joint protection of Austria and Italy.

We must hereafter recognize Tripoli under the new name of Libia Italiana. It is pleasing, even in this form, to see the old name of Lybia restored to the map.

The secession of several of the southern provinces of the new Chinese republic has brought on a war, which though widespread, does not seem to be very warmly supported by the combatants on either side. Apparently, the people at large care little who is at the head of affairs, so long as the local governments to which they have been accustomed are not disturbed. Wu Ting Fang, well known in America as the former Chinese minister at Washington, is trying to mediate between the northern and southern factions, but it is not improbable that the once great empire of China will be broken up into two normal republics, and will lose both Mongolia and Tibet, over which she now has but nominal control.

The rebellion or rebellions in Mexico are not yet suppressed and there is little evidence that the government forces are really gaining ground, though that is claimed by the government supporters. There are only two or three states in the whole republic not affected by the rebellion. It is expected that four of the southern states, including Yucatan, will secede and form themselves into two small independent republics. Yucatan was formerly independent.

The proposed treaty by which the United States would virtually establish a protectorate over Nicaragua has been met with protests from Costa Rica and Salvador, the former because she is concerned in the route of a possible canal which would thus come under United States control, and the latter because it would hinder the long expected union of the Central American republics.

A serious uprising in Venezuela is reported. It is organized by the friends of ex-President Castro, and has already

spread to two or three of the states in that little known republic. There is a third party in the country, the professed leader of which is now in the United States as a political exile, but is ready to head another insurrection.

The new battle-cruiser *New Zealand*, the first ship to be presented to the Imperial Government by any of the Dominions, has reached British Columbia, where she has met with hearty welcome. She will go around the coasts of South America and call at the West Indies and at Halifax before joining the home fleet in English waters.

There is great activity in naval construction in England. It is announced that there will be a new destroyer every week for the next nine months, a new light cruiser every thirty days for the next year, and a new super-dreadnought every forty-five days for the next eighteen months.

It is planned that a detachment of Canadian soldiers shall be present at the celebration of Perry's victory at Put-in Bay, September tenth. The remains of the British and American men who fell in the battle of a hundred years ago are to be removed from their present resting place and interred in the crypt of a great monument now approaching completion. The Union Jack and the Stars and Stripes will be draped on the bier together, while the soldiers of both nations do honour to the dead.

Dr. Robert Bridges has been appointed Poet Laureate, to take the place of the late Alfred Austin.

The Steamer *Diana*, of the McMillan arctic expedition, went ashore in the Strait of Belle Isle and was so badly damaged that the party had to return to port. Her cargo was transferred to the *Erik*, in which the expedition has again set out for its destination. It is their intention to find and explore Crocker Land. The Canadian Government steamer *Boethis*, which went ashore about the same time on her way to Hudson Bay, has been repaired, and proceeds on her voyage accompanied by the steamer *Acadia*.

Christian Leden, a young Norwegian explorer, is heading an expedition to the northern coast of Canada to study the Eskimo tribes.

The Steffansen expedition has left Alaska for the unknown north, and may not be again heard from for three years, except as wireless messages are received from time to time if that means of communication can be maintained.

SCHOOL AND COLLEGE

Miss Annie Sprague, honour graduate in mathematics of Mt. Allison University, and post-graduate student at Radcliffe College, has been appointed acting Vice-Principal of Mount Allison Ladies' College, as successor to Miss Baker. Miss Kenyon, of Alton, R. I., a graduate of the Emerson College of Oratory, is the new teacher of expression in the same institution. Other new appointments at Mount Allison are: Professor Alfred E. Whitehead, Associate of the Royal College of Organists, to be Assistant Director and Professor of the Organ and Harmony; Miss Winona Cruise, B.A., and Miss Mabel McLean Bentley, both graduates of the Massey-Treble Normal Training School of Household Science in Toronto, to the staff of the School of Household Science; Miss E. B. Nicholson and Miss K. R. Smith, honour graduates of Mount Allison Conservatory of Music, to be assistant teachers of piano; and Miss Christian Harris and Miss Nellie

Turner to be associate teachers in the Owens' Museum of Fine Arts.

Montreal teachers, under the jurisdiction of the Catholic school board, are to be given a general increase of salary. The minimum, as well as the maximum salary, is to be advanced \$100.00 a year.

Sussex, N. B., has wisely determined to guard against an exodus to the West from their teaching staff by making a general increase in the salaries. The aggregate increase will be \$500.00 a year.

The School Trustees of Fredericton are planning to put up an annex to the Charlotte Street School, to cost \$12,000.00.

Mr. J. Roland Murray, of Westmorland County, has been appointed instructor in Manual Training at the N. B. Normal School, in succession to Miss Alethea Wathen, who has resigned to become supervisor of cardboard work at Calgary, Alta.

The N. B. Department of Education and Agriculture have appointed Mr. R. P. Steeves, Inspector of Schools for Kings and Queens Counties, to be Director of Elementary Agricultural Education.

Mr. Steeves' place as Inspector is taken by Mr. A. J. Brooks, Principal of the Hampton Consolidated School.

Sinclair Laird, M.A., B.Ph. (St. Andrews, Scotland), for three years assistant professor of Education in Queens' University, has been appointed by the board of governors of McGill University to be the head of the School for Teachers in connection with MacDonald College, and also assistant professor of education at McGill.

Mr. William D. Morrow, late principal of St. Andrews, N. B., grammar school, will shortly leave for Vancouver, where he is to be on the teaching staff of the High School.

Professor McCarthy, of Kings College, N. S., has been appointed to the Biological Research staff of the Government steamer Minto. His work is to report on the food fishes.

The vacancy left by the resignation of Professor Killam from the staff of Mount Allison University has been filled by the appointment of Mr. Harold W. McKiel, B.A., B.Sc., as Professor of Mechanical Engineering.

The School of Music of Acadia Seminary has secured the services of Mr. Carroll C. McKee, of the Toledo Musical College and the Detroit Conservatory, as Director of Music. The Vocal Department is to be in charge of Miss Eva Hardy, Gold Medallist of the London Academy of Music.

It is understood that Mr. John E. Page, classical teacher at the Fredericton High School, has been appointed by the Dominion Government to succeed Mr. Frank E. Good as Military Cadet instructor at the same school. The new appointment brings with it an increase of \$50.00 to the salary.

Miss Florence Downing, of the Glace Bay teaching staff, has left for Saskatchewan, where she expects to teach.

Miss Edith Magee, who for some years has taught in the Victoria School, St. John, has accepted a position in the public schools of Vancouver, B. C.

Professor Lionel Stevenson, professor of Agriculture and Farm Superintendent at the Agricultural College, Truro, has gone to Ottawa to take a position in the Forestry branch of the Dominion Department of Agriculture.

His place is taken by Professor J. M. Trueman, of Point de Bute, N. B. Professor Trueman is a graduate of the

Truro College, and also of the Cornell Agricultural College. He has had years of experience in farm management and in leading institutions in the United States, and it is a matter for congratulation that Nova Scotia has been able to bring back to Canada a man of such standing.

Robert A. Hall, Ph.D., has been appointed to the position of Professor of Chemistry at the University of New Brunswick. Professor Hall has been one of the faculty of the University of North Carolina, and later on the staff of Washington University, St. Louis.

The Moncton school board has engaged Miss Beatrice Welling, of Andover, to succeed Mr. W. A. Cowperthwaite on the staff of the High School. Miss Welling is an honour graduate of the University of New Brunswick, and of Radcliffe College.

At the closing exercises of the Fredericton High School in June, the Principal, Dr. Berton C. Foster, was presented with \$100.00 in gold, as testimonial from former pupils. Mr. F. A. Good, who is leaving the High School for the Normal School staff, was presented with a travelling bag by the members of the graduating class, while the undergraduates and members of the teaching staff gave him a dressing case.

RECENT BOOKS.

Original sources are being more and more drawn up by history teachers who use modern methods, and nowhere have we seen them in more accessible form than in the series of *Documents of British History*, reprinted from Keatinge & Frazee's *History of England for Schools*. Every teacher should send at once for the section covering the history course for the year, for the series appears most conveniently and cheaply in six little books:—A. D. 78-1216; 1216-1399; 1399-1603; 1603-1715; 1715-1815, and 1815-1900. (Price eightpence each. Adam & Charles Black, 4 Soho Square, London).

A. & C. Black, also send such a charming illustrated French reader for the little ones, that we long to use it with a class. It is intended for pupils who have studied French by the Reform methods, and serves as a beginning book in French composition, as well as a reader. *Récits et Composition D'Après L'Image*, par M. Auceau et E. Magee (price 1s. 6d.).

A more advanced French reader intended for translation, is Picard's *La Petite Ville*, a comedy of the time immediately after the French Revolution. It is published in a most attractive little volume, with vocabulary and notes, by Ginn & Co., Boston, and costs forty cents.

From Ginn & Co. we have also a delightful book called *A Dickens Dramatic Reader*, giving scenes from *Pickwick*, *Nicholas Nickleby*, and *Christmas Stories*. The original language is closely followed, and the scenes are well chosen. The book is recommended to those who want to have their high school or academy pupils present anything in the form of a simple play. [A Dickens Dramatic Reader, by Fanny Comstock. Ginn & Co., 60 cents.]

The Wentworth-Smith Mathematical series is represented this month by Book I of the *School Algebra*. (Ginn & Co., 90 cents.)

Books Received.

The Gospel of St. Luke, edited by Walker & Richards, 1s. 6d.
Child Mind, an introduction to psychology for teachers,
 by Benjamin Dumville, M.A., London, F.C.P., 2s. 6d.
Henry IV. Part I, by A. J. F. Collins, M.A., 2s.
Spelling and Punctuation, H. Shoosmith, M.A., 8d.
 All these are published by the University Tutorial Press,
 High Street, New Oxford Street, London, W. C.
A First Book of Composition. Briggs & McKinney, Ginn
 & Co.

The Teaching of Arithmetic, by David Eugene Smith.
 Ginn & Co., \$1.00.

Received With Thanks.

From the Smithsonian Institution:—*The Twenty-Eighth Annual Report of the Bureau of American Ethnology.*

The Physiography of the Rio Grande Valley in Relation to Pueblo Culture.

From the U. S. Bureau of Education:—

Report of the Commissioners of Education for the Year ending June, 1912, two volumes.

From the Department of Agriculture of New Brunswick:—
The Report on Horticulture and The Annual Report of the Fruit Growers' Association for 1912.

University of Ottawa Review.

Trinity University Review.

Announcements of University of Chicago.

Report of the Minister of Education for Ontario for the Year 1912.

RECENT MAGAZINES.

The *Chautauquan* has changed its form, and become "a weekly newsmagazine." The first issue in its new form appeared on June 7, with an attractive cover and interesting table of contents. Number 5, of July 5th is a special book number, and contains, besides critical articles and reviews, a suggestive and useful classified list, with prices of new and standard books. Subscription price, \$2.00 a year. five cents a copy.

We have before us the eleventh number of *The Round Table*, published by Macmillan & Co. This is a co-operative enterprise conducted by people who dwell in all parts of the British Empire, and whose aim is to publish once a quarter a comprehensive review of Imperial politics, entirely free from the bias of local party issues. The affairs of *The Round Table* in each division of the Empire are in the charge of

local residents, who are responsible for all articles on the politics of their own country. It is a publication which would seem invaluable to all who wish to keep themselves informed on the political movements of the day, and to get a comprehensive view of the affairs of the Empire. It should be very useful to teachers of modern history. The articles in the June issue include the following: *The Balkan War and the Balance of Power; Ministers and the Stock Exchange*—an attempt to sum up the history of "the Marconi Affair." *The Grain Growers' Movement in Western Canada*—an account of an organization which is of immense importance to the Empire. Four articles deal with Canadian matters—*Obstruction in Parliament; The Closure and the Senate*—accounts of and comments on the treatment of the Naval Bill; *Canadian Banking Legislation; and The American Tariff.*

One of the attractions of the *Canadian Magazine* is the series of charming reproductions of well-known pictures. The August number opens with an article by Professor Mac-Mechan on *Changing Halifax.*

The *Century* continues the timely series of papers by Robert Hichens, called *Skirting the Balkan Peninsula*. This one is called *Stamboul, the City of Mosques*, and has colour illustrations. *American Makers of the New Japan*, and *If Canada were to Annex the United States* are other interesting articles. Mrs. Burnett's delightful story, *T. Tembarom*, is drawing to a crisis, and the author of *Molly Make-Believe* begins a story called *The White Linen Nurse.*

Recent issues of *Littell's Living Age* are as readable as that magazine usually is. Anyone wishing to keep up with current magazine literature cannot do better than to subscribe to this periodical.

St. Nicholas for August has, besides stories, instructions for swimming, an entertaining account of Louis Agassiz, and under the head of *The Story of Hunger and Food*, gives the substance, much simplified, of a lesson heard at the Rural School of Agriculture on Commercial Fertilizers.

Magazine articles of special interest to teachers are:—
Commonsense in Pronunciation.

Cain, the Key, a story—Atlantic Monthly, August.

Makers of the Dominion, Canadian Magazine, July.

How Can we Know Ourselves, by Hugo Munsterberg
 Youths' Companion, June 19.

The Economic Value of Imagination, World-Wide, August 2,
 (from the Outlook.)

Morality and the Child, Littell's Living Age. August 2.

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W- S. CARTER,

Chief Superintendent of Education.

The Educational Review.

Devoted to Advanced Methods of Education and General Culture

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THE EDUCATIONAL REVIEW,
St. John, N. B.

We wish all success to those teachers who are leaving the Maritime Provinces for the West, and we hope that the REVIEW will help to keep them in touch with the East.

The school teacher should be more appreciated. We think the teacher really does more for Canada, and gets less for it in money or recognition than any other class.—*Maritime Farmer*.

Several contributions were received too late for the September REVIEW. Occasional contributors

should remember that all correspondence intended for publication should reach the editor by the first of the month.

The August issue of the REVIEW is exhausted, and we still have demands for copies. Subscribers who do not make a practice of preserving their REVIEWS, may be willing to return their August numbers. If a copy is returned in good condition, the sender's subscription will be extended one month.

Each child must be interested afresh, and made to see that knowledge is interesting and valuable. You must be constantly ready to use any means by which you can awaken your pupils' curiosity, always ready to observe the set of their minds and the tendency of their thoughts, constantly looking out for some new way of putting things so that they may be more readily acceptable.

A good deal of knowledge is necessarily required for the simplest and most rudimentary teaching. For unless you know a good deal about things, you put them into various shapes. A stupid person learns one formula and goes on repeating it. But it is death and destruction to a teacher if he can only say what he has to say in one way.

RURAL SCIENCE SCHOOL.

The attendance at the Rural Science School at Truro was beyond all previous records, one hundred and five students being enrolled. Thirty of these were selected students of the N. S. Normal School, who were allowed to begin their Rural Science course in April and remained during the summer session. There was also a picked band of New Brunswick teachers, sent on the initiative of the Director of Elementary Agricultural Education to take the course. These specially chosen students gave an excellent account of themselves.

The work, consisting of lectures, laboratory and field work, was carried on at the Normal School and the Agricultural College by instructors from

the staffs of these institutions, and included Agriculture, Horticulture, Biology, Botany and other branches of Nature study, Physics and Physical Drill. Teachers and students alike were enthusiastic, and the results were gratifying. Dr. McKay, Superintendent of Education, visited and addressed the classes, and a very interesting lecture on Museum Work was given by Mr. Harlan Smith, Archaeologist on the Geological Survey.

Of those students receiving diplomas at the end of the session, Miss Effie Mott, West Branch, N. S., made the highest marks. Following in order, and not far behind, were Miss Pearl Kedy, Mahone Bay, Miss Laliah Mauzer, Bridgewater, and Miss Merna Frank, Pleasant River, N. S.

Next year's course of study is to be somewhat modified. In the past, all subjects have been treated as of equal value. In the future, there will be major and minor courses. The more important subjects will be given in two-year courses, while minor courses may be covered in a single session.

In connection with the stimulus that has lately been given to the study of agriculture by our own government, and the largely attended agricultural classes, both at Truro and Halifax, it is interesting to note that the Commissioner of Education of the United States reports that "it pays to teach agriculture." Much higher salaries are commanded in the United States by special teachers of agriculture than by teachers of other branches. And this is one of the many indications of the growth in importance of this school subject. In 1910 eighteen hundred schools reported that agriculture was taught as a separate study in the High School department, and 1912 shows a very large increase in these figures. Elementary instruction in agriculture is now required in seventeen states of the Union.

EDUCATIONAL CONFERENCES.

The League of the Empire, which for twelve years has been working in the interests of Imperial Education, convened the first Annual Meeting of Teachers' Associations throughout the Empire in 1913. This meeting was held in London in July, and attended by many Canadian teachers and educational authorities. The Imperial Union of Teachers was founded in the presence of about 300 delegates from Teachers' Associations in all parts of the Empire. The government of Ontario have invited the League to hold the next quadrennial

Imperial Conference of Teachers' Associations in Toronto.

At the meeting of the Dominion Educational Association, held in Ottawa in August, some of the important topics discussed were:—reciprocity between provinces in the matter of teachers, free text books, and uniform text books all over Canada; the introduction of Montessori methods; and the establishment of a central bureau of education. An outline of the report of the Royal Commission on Technical Education was presented by Dr. J. W. Robertson, Chairman of the Commission.

Agricultural Education is receiving a great deal of attention. At Guelph, Ontario, early in August, there was held a Rural Education Conference, at which lectures and addresses were given on different phases of agricultural problems and of rural education. Accounts were given of the work done in agricultural education in Germany, Scandinavia and the United States. The Consolidation of Rural Schools, the improvement of school grounds, and the development of the school as a social centre, were some of the subjects discussed at length.

At the Educational Conference at Fredericton, between the Chief Superintendent and the School Inspectors of New Brunswick, Agricultural Education in the country schools divided the interest with the subject of technical and industrial training in the city. Inspector Steeves reported that there are at present twenty-one school gardens in the province.

At the International Congress on School Hygiene, held in Buffalo, August 25-30, there were special discussions on the following subjects:—School Feeding, Oral Hygiene, Sex Hygiene, Conservation of Vision in School Children, Health Supervision of University Students, School Illumination, Relation between Physical Education and School Hygiene, Tuberculosis Among School Children, Physical Education and College Hygiene, The Binet-Simon Test, the Mentally Defective Child.

The Canadian Public Health Association is to hold its third annual congress at Regina, September 18-20. All meetings will be open to the public. Of special interest are the sectional meetings to consider medical inspection of schools. School grounds, supervised playgrounds, the ventilation, heating and lighting of schools will all be considered. The chairman of the section on Social Workers is Professor W. W. Andrews, formerly of Mount Allison.

BOTANY.

L. A. DEWOLFE.

This is the month of Compositae. The golden-rods and asters are everywhere. May we make a little closer acquaintance with the family? Very few characteristic marks are necessary to distinguish it. Before giving any, however, I suggest a careful examination of the flower of the dandelion, large blue aster or daisy, and a thistle or burdock.

In the dandelion, how do we know that each yellow petal-like division is not a petal? Pull one out. What do we see besides the "petal?" Notice the pistil with its curled two-pronged stigma. Taking this pistil near its top, gently pull it. It pulls out of a sheath. What is this sheath? With a pin, separate it into five divisions, each of which is attached by a slender filament to the "petal" below. The sheath proves to be nothing less than five stamens, whose long, slender anthers grew together round the style. Is this "petal" really the shape of an ordinary petal? Notice that it is goblet-shaped at the base; and one side of the goblet is prolonged into what we at first thought was a petal. In fact, this is a whole flower. We already noted its pistil and its five stamens.

The numerous white hairs attached to the seed below the corolla are in the right place for sepals. They do not look like sepals, but on account of so many small flowers growing in such a compact mass, sepals were not needed. Instead of throwing them away, however, the plant found another use for them. Every child knows what that use is. Any windy day after a dandelion has gone to seed, it gives a free demonstration of its ability to fly over a neighboring field, where it may have more room to grow. True, it cannot alight on any desired spot at will; but each plant sends so many seeds out over the fields that some must fall on favorable soil. It is a game of chance. Many are wasted. But, from the gardener's point of view, too many find a suitable lodging.

The dandelion corolla shows that some of its ancestors had five distinct petals. How fortunate for the botany students of the present day that those five teeth are at the end of the corolla—giving mute evidence of part of its evolution! The five petals grew together, and started to roll into a tube. But, for some reason, they gave it up.

Now look at the small central flowers of the aster or daisy. Here, the corolla is completely rolled into a tube. Otherwise, the structure is

practically the same as in the dandelion. But with the flowers thus rolled, the corolla seemed to be defeating its own purpose. By rolling into a small tube and placing some nectar at the bottom the plant made a visiting insect work for its living. In thus working, it came in closer contact with all parts of the flower than in the case of a flat, open flower. But this scheme had a serious drawback. When the corolla is completely rolled up, insects could not see it very far away. The habit of clustered flowers was some assistance. One enterprising plant, however, somewhere in the distant past, hit upon a plan that has worked well. It left part of its flowers flat to attract the attention of insects; and rolled the rest to keep them working when they arrived. Since the wants of various insects must be catered to, various sizes, colors and arrangements have been adopted. This gives rise to various genera and species.

This plan of a few outer rows of flowers with flat corollas and inner ones with tubular corollas has persisted in such plants as the daisy and mayweed; the ragworts, of which we have four or five species; the golden-rods, about a dozen species; the asters, also of more than a dozen species; the fleabanes, coltsfoot, coneflower, yarrow, and bur-marigold.

But there is often more than one way of meeting a difficulty. Some other plants of similar structure left their corollas rolled up, but increased their size or the size of their clusters. These, too, have in process of time assumed many forms. Here belong such plants as the thistles, burdock, tansy, everlasting, boneset, and mugwort.

Belonging to the group that never rolled their corollas are the dandelion, fall-dandelion, cichory, hawkweed, white lettuce, sow-thistle, goat's beard and others.

As various as these plants seem to be, however, they all agree in having clustered flowers (in heads), surrounded by an involucre of few or many bracts; and each individual flower having its fine anthers joined, forming a tube round the style. After all, it is an easy family to identify. There is much more difficulty, however, in determining all the species of some of the genera.

Because of the variety of ways this family of plants has worked to secure the cooperation of insects and the wind in pollinating and scattering its seeds, botanists class it as one of the most highly specialized groups. It is at the top in the

scale of evolution of flowering plants. The abundance of asters, goldenrods, dandelions and daisies is ample evidence that they have solved the question of "struggle to exist" rather successfully. Though they make good use of insects, they are not slaves to them. Some species are habitually self-pollinated and practically all can get along well with self-pollination. This habit of independence helps make the family a successful one. Yet they use other agencies when it is to their interest to do so.

Many of our garden flowers belong to this family. On account of their artificial propagation, they have assumed a variety of shapes and colors that quite out-strip the wild species. Among those worthy of cultivation and study are Sunflower, Cosmos, Dahlia, Coriopsis, Marigolds, Asters, Daisies, Zinnia, Ageratum, Bachelor's Button and many more.

NATURE STUDY OF ANIMALS

Suggestions for the Last Part of September and the First Part of October.

PROFESSOR H. G. PERRY.

GRADE I.—Give short lessons, limiting them for the most part to a single topic, on some of our domestic animals, as the horse and cow. Treat some of our wild animals in the same way, e. g., the bird and toad. Make comparisons of the body covering of these animals, their uses, movements, etc. Teach these lessons from the things themselves. The spirit of investigation should be cultivated early. The child must be taught that through examination and observation he can find out many interesting facts about animals and things. He must be shown his powers that he may find himself. Remember that the joy of personal investigation comes very early in the child's experience. As his teacher, it may be your joy to create a new world for him, and to foster and direct its development.

Great care should be exercised in the introduction of the study of animals that may be repugnant to the pupil. Most children fear the snake, and some even the toad. They are "crawly things," and a certain disgust has centered around them, but if the teacher exercises care, and has learned proper regard for these animals, she will soon bring her pupils to the right attitude. But do not expect they are all going to handle

toads and snakes the first term. If they have learned respect for them and something of their great use to the gardener, they have gone a long way in the right direction. A lesson or two on the snake may follow the work on the toad, if time permits.

GRADE II should review the work on the toad, with some extensions, and make comparisons with the snake. Lessons in kindness to these animals have to be taught again and again, especially to boys.

Have one or more toads in the school. They may be made comfortable for several days in an aquarium or glass box, with about two inches of moist earth in the bottom.

GRADES III, IV and V should review this work, much interest will center around the toad-cage.

Ask your children to bring all sorts of insects—flies, caterpillars, bees, spiders, ants, moths, squash bugs, anything they can find, especially such as may be destructive in the school garden, or on the plants at home. During the Nature-study period turn these in with the toad, and let the class gather around and watch him eat his dinner. The best results are obtained by using what might be called a tame toad, one that has been captive for some time, and has been fed in this way.

The pupils should note the manner in which the toad catches an insect—a flash of pink, the tongue, almost too quick for the eye to follow, and the insect is gone. Does he require many for a meal? Will he eat dead insects? From these answers the pupils may be led to reason "What a power for good one such little animal may exert in their gardens." Try the experiment in the school garden.

The snake does a great amount of good also in helping to keep down insect pest. Do birds help in this work? How? Study the food of these animals. The fall migration of birds has begun. All classes should observe and keep records.

Study toads about your own homes. Search for them just after sundown or after a shower. Are they as readily found during the day? Why not? Explain protective coloration in toads, snakes, etc., making a list of animals that show such protection.

The older pupils may be interested in finding the small toads on the banks of ponds and brooks. They leave the water during the last part of August.

Extend the work of Grade II to animals which

have horns, bills, web-feet, claws, fins, and scales, making lists of the same, and noting the use of these parts.

GRADE III.—The work of Grade III should be extended to some of our domestic animals, as the sheep, under such topics as food, habits, value, wool and the things made from it. At what time of year do we most appreciate woollen clothes? Why? We hear people say, "Warm as wool," and "Wool is warmer than cotton." Test the correctness of these statements by use of the school thermometer. Wrap the bulb in wool or in woollen cloth, flannel. Does the mercury show a higher temperature? Make the test using cotton. Keep your hands off the bulb in both cases. Is the cotton cooler than the wool? Review your answer to questions given above.

Write to the Department of Agriculture, Ottawa, for bulletin on the sheep and the sheep industry in Canada. Such literature has its value in every school, no matter how large or small your school library may be.

GRADES IV AND V.—At this season of the year direct the attention of grades IV and V, as well as more advanced pupils, to some of our game animals, as the moose, deer, duck, partridge, etc. Call attention to the laws protecting these animals. Why are they protected? Mention some animals that have practically been exterminated by man. The slaughter of animals for their fur will serve as an interesting topic at this time, and also a discussion of the fox farming industry that has lately originated in P. E. Island. Send to the Department of Agriculture, Ottawa, for a copy of "Fur Farming," by J. Walter Jones, B.Sc. It contains valuable data and information on the fur industry and black-fox ranching.

The food and general habits of game animals should also be considered. The country boy knows well that flocks of partridges at this time of year are most often found near grain fields and hawthorn bushes, *Cratægus*. Why are they in such haunts at this time? What proof have you?

Grade V, along with the higher grades, may continue work on the insects. Collect adult forms, larva and pupal stages as you find them. The caterpillars of the Swallow-tail are most interesting subjects for study. They are never furnished with spines, but are either naked or clothed with very fine hairs. A striking peculiarity of these larvae

is the presence of a bright colored pair of fleshy horns, which can be protruded at will. The larva of the Black Swallow-tail may be found at this season. It is the green worm, ringed with black and spotted with yellow, that eats the leaves of parsnips, carrots, and other umbelliferous plants. Place several in your cage, feed as directed in last issue of the REVIEW, and watch for angular pupa. Search for the larvae of the Polyphemus moth (*Tela polyphemus*), and the Promethea Moth (*Callosamia promethea*) and treat them in the same way. Do these form angular pupae or cocoons?

You will find small paper bags a good cage for many caterpillars that do not require earth in which to pupate. After pupation has taken place, usually in one corner of the bag, cut the other parts of the paper away, leaving a strip by which it may be suspended in a large box kept for this purpose.

In this work insist upon carefully kept records, You may use the description required as a composition exercise.

Teach the names of the parts of the caterpillar, and also of other animals, as they are needed in the work.

High School classes should also be introduced to the broader scientific classification of insects. Do not fear for your Nature-study if a little of the scientific occasionally creeps into your work. There is a reflex influence between nature-study and what may be termed pure-science, which is most stimulating to both.

Every school should be provided with one of the smaller text books on Zoology. There are many excellent texts on the market at about \$1.50 each. You will find "General Zoology," by Linville and Kelly, Messrs. Ginn & Co., Boston, Mass., a good text. The Macmillan Company of Canada, Toronto, also publishes a useful text, "Zoology," by Davenport.

The very essence of a good teacher is that he should know so much and know it so readily and clearly that he can answer any fair and honest question that is asked about the matter he is teaching, and answer it in the language, and according to the way of thinking of the person who is asking him.—*Thoughts on Education* by Bishop Creighton.

CENTENNIAL ANNIVERSARIES OF THE WAR OF 1812.

J. VROOM.

XV.—The Battle of The Thames.

October 5.—When the loss of the Canadian fleet on Lake Erie left General Procter cut off from his base of supplies, it became necessary for him to abandon the Detroit frontier and fall back upon the Central Division at Niagara. The soldiers taken to man Barclay's fleet had been made prisoners, or had fallen in the fight, thus reducing his force. Food and ammunition were nearly exhausted. Harrison's army had been heavily reinforced and was ready to advance. There was no time to lose.

Yet Procter was slow to move. The Indians, though they had not hesitated to leave him at Fort Meigs, now accused him of intending to desert them, and urged him to remain and make a final effort to repel the enemy. He explained the situation, but they were unconvinced. Unwillingly, and in decreasing numbers, they accompanied him in his retreat along the line of the River Thames, up which his scanty store of provisions was to be conveyed in boats.

On the evening of September 29, the third day after his departure, Detroit and Sandwich were occupied by Harrison's troops, and another invasion of Canada was begun.

Pressing on in pursuit, on the evening of the fourth of October, and in the early morning of the fifth, the enemy overtook and captured the boats which were carrying Procter's supplies, and with them the guard by which they were accompanied. Procter's forces, still retreating, by this time had reached a point some two miles above Moraviantown; and Harrison's troops were close upon them. Procter's effective force now consisted of less than a thousand Indians, under Tecumseh, and less than half as many Canadians. They took up a position in an open wood to await the coming of the enemy. The invaders numbered more than three thousand, including a large body of mounted men.

The battle was soon over. The British line was broken by a cavalry charge, and each section in turn was surrounded and captured. Only a few scattered companies escaped. General Procter fled from the field; finally reaching Grand River, near the head of Lake Ontario, with less than two hundred and fifty men. Many brave

men were taken prisoners; but the greatest loss was in the death of Tecumseh, the noblest and best of the native chiefs who so valiantly supported the Canadians in defence of their homes and loyally stood by them in defeat.

After burning Moraviantown, for which there was no excuse, General Harrison returned to Detroit; where he re-established the civil government of Michigan Territory. The chief object of his expedition was thus accomplished. Excepting the post at Michilimackinac, all the territory which had been conquered by the British was regained.

Major-General Henry Procter, the hero of three battles in which he defeated armies equal to his own, was held responsible for the defeat at Moraviantown; although he had foretold such an occurrence when the reinforcement which he needed were denied. Like Sir Roger Sheaffe at York, he knew that the battle was lost before it was begun; but, unlike Sheaffe, he did not succeed in making good his retreat. Both, perhaps, have been too severely blamed. Procter was relieved of his command, and suspended from rank and pay; and thus he disappears from Canadian history. Another General Henry Procter, (distinguished by a different spelling of the name,) came to Canada in the following year and served on the Niagara frontier. The former died in England in 1822, the latter in Wales in 1859.

The western part of Upper Canada was left undefended after the battle of the Thames, and was exposed to raids and forays such as had vexed the people of the eastern sections in the early stages of the war.

It is proposed to commemorate the centenary of Tecumseh's death on October fifth of this year, by a military display on the site of the battle of the Thames, or battle of Moraviantown, as it is called; and also by laying the corner-stone of a Tecumseh monument at Chatham.

The following extract from the Youth's Companion is a good example of the spirit in which national history should be studied:

It is natural and fitting enough to single out a decisive victory as the chief event to commemorate in celebrating the anniversary of an important war. But is it wise for this nation — or for any nation — to commemorate only its great victories? Would it not be well for a people to observe also the anniversaries of the great defeats that have marked its history, especially when those defeats were disgraceful; when

they left a lesson in humility and a warning against falling again into the blindness or arrogance or cowardice that caused them?

In the history of our second war with Great Britain there are chapters that many Americans find it unpleasant to read. Shall we therefore ignore them? On the sea we were better prepared than Great Britain, and there, for us, the war was in the main a succession of glorious victories. On land it was quite otherwise. The attempted invasion of Canada failed miserably.

These things are a part of the history of the war. No good American should forget them, any more than he should forget the victories on the sea and the defence of New Orleans by Jackson and his men. The best kind of Americanism is not that which boasts all the time, or any of the time, but that which soberly recognizes the great truths of history — the warnings of past failure and defeat no less than the obligations that past victories have imposed.

NOTES ON NEW BRUNSWICK HIGH SCHOOL LITERATURE.

I.— The Diverting History of John Gilpin.

PRESENTATION OF THE POEM.

This is of great importance, and the method should be determined by the ability of the class. The first aim must be to get the story clear.

With a class who are just beginning to study literature, read the poem to them, in as interesting a manner as you can. Of course you will study it carefully first, and get into the spirit of it yourself. Make clear the division into parts — the introduction of the hero, the conversation between him and his wife, the setting off of the chaise, etc.

Call upon the children to show that they have the incidents of the story clear and in order. Have each incident stated in a sentence, thus: John Gilpin and his wife planned to celebrate the anniversary of their wedding by dining at an inn at Edmonton; the wife and children set off in a chaise; John was going to ride after them on a borrowed horse; just as he mounted he was detained by customers; and so on. Go round the class, getting one statement from each child. Have the next one take up the story briskly, and everyone ready to see when a point has been omitted. Do not be too particular about the wording; you don't want attention diverted from the story. Keep your aim in view.

This may seem childish work; but remember, we are teaching the children how to read, that is, how to get the author's full meaning, and if he tells us a story, we must be sure that we follow it.

With a more capable class, set them to read the

poem through at home, and write out their own summaries, allowing not more than one hundred and fifty words. Have several of these read, and criticized by the class. This is quite a hard composition exercise, and you may find it better to have the summaries made orally in class.

Whichever plan is followed, the whole poem should be read, and the outline of the story grasped in the first lesson.

Draw attention to the title. Is it a "diverting history?" Turn to the notes, page 234, and read what Cowper thought about it. Did John Gilpin think it funny? Did Mrs. Gilpin? Did it ever happen to you, or to anyone you know to miss a picnic, for instance, by a succession of mishaps? Did you think it was funny at the time? Afterwards?

HOME WORK.

Home work may be set on a study of words and phrases.

Make a list of the words you do not understand well enough to use in sentences of your own, and look them up in a dictionary. Come prepared to ask questions about any phrases, references, or words that you do not understand. What is the difference between *credit* and *renewal*? Between *renowned* and *famous*? Between a city and a town, (a) in Canada, (b) in England? Is London usually spoken of as a town? What is meant by the City of London? [The "City" is only a small portion of London, extending, roughly speaking, only about a mile along the north side of the Thames. It is the commercial centre of London.] *Trainband* — Company of Militia. See lines 63, 64. What does *exercise* mean in line 64? *Eke*. Compare "to eke out." *Twice ten* tedious years. Why not simply *twenty years*? Can you give other examples of poets' ways of expressing time? *Linen-drafter*. What do we call this? *For that* = ? "The Bell" — name of an inn. What good reason for inns having painted pictures instead of printed signs? In the times when many people could not read, all could be guided by the pictures. What remains of this custom have we? e. g., a pestle and mortar at a drug store.

1, Bent on pleasure; 2, full well; 3, all agog; 4, through thick and thin; 5, neck or nought; 6 not a whit; 7, in such trim; 8, hue and cry. Which of these phrases, or variations of which of them are now in use? Explain them. In (4) what is the thick and what is the thin? "Neck or nought," a racing phrase; to win by a neck, or be nowhere. "Turnpike men," the men who kept the gates set across roads to keep travellers from passing until they paid toll for keeping the roads in order. Within our recollection there was such a gate across the end of the St. John Suspension bridge, and the toll-man lived in the little house close by. How do you pronounce (a) balcony, line 142; (b) comely, line 184. Where did Cowper get the phrase "said or sung?" What have you to say about the wording of line 12?

How many things can you find out from the poem about the characters of Mr. and Mrs. Gilpin? Can you illustrate

the line, "the pride that apes humility" from the story? Is verse 35 really the middle of the song, in any sense?

Other questions of the same sort may be set for home work or brought up for discussion in class. Some good topics are:—The metre and rhyme; the simple language, suited to the subject; the similes; alliteration; the verses omitted by the poet (where do you think they were intended to come in, and why did he leave them out?); Cowper's hymns. Those who have hymn books at home might make a list of familiar hymns that he wrote.

THE POET'S LIFE.

The summary of Cowper's life given in the text is dull, and the comments on his work difficult and unmeaning for young students. Emphasize the important points in his life, and make them interesting by association. Connect the dates with history. Cowper was a young man when Quebec was taken by the English. He was writing the "Task" when St. John was founded. He was a schoolmate of Warren Hastings, one of the founders of our Empire in India. While Cook was exploring and Rodney and Wolfe fighting the French and the Wesleys preaching, Cowper was helping to fight the battle against the slave trade. His suffering from insanity reminds us of the story of Charles Lamb, who was forty years younger. Read Mrs. Browning's *Cowper's Grave*. His happiness in his friends and their devotion to him, his love of a quiet country life and of animals should all be illustrated from his poems. He has an important place in the history of English literature, for it was he who, first of his time, showed the close observation and love of Nature, that was almost unknown in eighteenth century poetry, but is familiar to us in the great poets who came after him.

Passages to be memorized:—Pity for Poor Africans; My Mother's Picture, from "Thou as a gallant bark" to "Passed into the skies;" Boadicea; The Loss of the Royal George; and from *The Task*, "O, Winter, ruler of the inverted year;" "Now stir the fire;" "Come, evening once again;" "He is the freeman;" "Thou art the source and centre."

Boys using a Bangor, Me., playground, have formed the Third Street Playground Insurance Company, patterned on the factory insurance system of Germany. Each boy is assessed a premium of ten cents a season, payable in two-cent weekly instalments, and out of the money thus collected, damages for injury to benches and apparatus on the playground will be paid.

HOW TO TEACH ARITHMETICAL SHORT CUTS.

GERALDINE COSTER.

It has been my experience that most children are very slow to pick up the ordinary arithmetical short cuts or time-savers, and still slower to use them. This, I have found, applies to the devices that the teacher shows them, but not to those they may happen to hit on for themselves. The remedy is obvious. Do not show your pupils short cuts. Let them find them out for themselves, and they will always remember and always use them with pride and joy.

I had a class of little girls who had reached the stage when they needed to know how to multiply by 10, 20, etc. I said, "Did you ever know that there was a trick for multiplying by 10?" As it happened, not one of the children had ever heard of it. If any one of them had known the device, I should have asked her to keep it a secret for the present. I next put on the board about a dozen small examples, as: 89×10 , 74×10 , 184×10 , etc.

Then I said, "Copy these examples and do them at home. Then look at them carefully and see if you can see the trick. Do not ask father or mother or any one. If you see it, write what it is on a little piece of paper, sign your name, and put the paper on my desk to-morrow. If you cannot see it, write "I had to give it up," and put the slip on my desk."

It was a bright little class, and next morning every single child put a funny little note on my table with a childish explanation of how to multiply by ten.

When arithmetic time came, I said, "It was funny, wasn't it, about multiplying by 10. Did any of you see why adding a cypher did the trick?" They had studied a good deal about tens and units, and a very few minutes sufficed to bring out whys and wherefores.

I taught them how to multiply by 20 and 30, etc., in exactly the same way, and the interest was intense. No doubt it would have been more scientific to begin at the other end, and expound the theory before inculcating the practice. But it is not always such a bad plan to put the cart before the horse, as the proverb might lead one to suppose.

Number Games for Children.**FOR VERY LITTLE ONES**

NUMBER TOUCH.—Ask a child to close his eyes. Touch his hand a number of times and have him state the number. Children may try this with each other.

NUMBER SOUND.—Ask the pupils to close their eyes and tell the number of taps that one makes with a pencil, the number of times the bell is struck, or some other definite number of sounds.

BIRD-CATCHER.—Arrange children in a circle, assigning a number to each. Let one child sit or stand at the centre and ask for results within the numbers assigned. For example, "How many are 6 roses and 3 roses?" The child having the number 9 holds up his hand and announces the number. He has caught the bird.

FOR OLDER CHILDREN.

Let each pupil (1) write any number of digits; (2) write the number obtained by reversing the order of the digits in the first number; (3) subtract the smaller from the larger; (4) write the difference obtained and write the new number formed by reversing the order of the digits in this difference; (5) add this new number to the difference found in (3). The result of the last operation is always 1089, and all the pupils will have the same answer, even though each chose his own number. For example, suppose one number chosen is 643. The successive steps give

$$643 - 346 = 297; 297 + 792 = 1089.$$

—From "*The Teaching of Arithmetic*" by David Eugene Smith. Ginn & Co., \$1.00.

God, who created me
Nimble and light of limb,
In three elements free
To run, to ride, to swim;
Not when the sense is dim.
But now from the heart of joy
I would remember Him:
Take the thanks of a boy.

—H. C. Beeching.

On June 23rd a monument was unveiled in the orchard of Hougoumont. It was erected by the French in memory of their countrymen killed in the battle of Waterloo. The inscription consists of Napoleon's words concerning his men who took part in the famous fight:

"The earth seemed proud to bear so many brave men."

PRIMARY WORK.

ALICE L. FAIRWEATHER.

Red Letter Days.

As an incentive to good conduct the pupil's names may be written on the blackboard in blue crayon. A reprimand from the teacher means one letter of the name being changed to red. It is, of course, considered a great disgrace to have one or more red letters and I have found it useful to temper justice with mercy. Call the letters pink and allow them to be worked off, leaving the name in its blue of virtue.

Human Calendars.

During the first days of a month the children learn to know and to spell the name of the month, and the season. They learn the number of days in the month, and every day they are required to tell the exact date and any noticeable fact about the day. They take great pride in being little human calendars at home.

Dotting Cards.

"Dotty" cards, the children call them, and they love working with them more than any of their other occupations. I bought a set of kindergarten sewing cards with large holes. These the children place on a blank page of their book, dot in through the holes with a pencil, remove the card, and complete the design. It can then be filled in with coloured crayon, and serve as an illustration for a story. These cards are also useful for making home made sewing cards. The designs can easily be transferred to squares of card-board, and the holes pricked with a large needle. The cards come in sets of fruit, animals and useful household objects.

Reverence for the National Anthem.

It is not practicable to have singing in my school, so my pupils always stand to recite "God Save The King." They are taught that it is a hymn, and not merely a sign that an entertainment is ended.

Seat Work Suggestions.

I have known teachers who had many grades to almost neglect their little ones for the pupils in the upper grades. If you can only spare time

for their reading and number work, then prepare plenty of busy work pertaining to their daily work. Don't abuse any one kind. I know a teacher who has only one box for busy work and has used it for three weeks.

Don't use toothpicks day after day in the counting lessons. Use corn, beans, buttons, dominoes, marbles, toy clothes-pins, pine cones, colored leaves, etc. Use colored inch circles. Let the pupils mark around a cardboard circle supplied by the teacher, color, and cut out. I have a writing paper box full. I use them in connection with the teaching of colors as well as for counters.

Trace small pictures of animals and birds on cardboard. The primers and teachers' papers furnish abundant material. Cut these out. Let the pupils mark around them, then color. An occasional question will prevent the children coloring cats red or ducks green. These may be used for borders or cut out and used for applied work. (I believe in plenty of tracing, cutting, and pasting. The children like it and it means neater work in the upper grades).

Do the same with pictures of vegetables in the seed catalogue. These may be traced on a large sheet of paper, colored; at the top have written "My Garden" and under each vegetable, its name.

One day I used a toy tea-set during number lesson. Another day I bought ten tiny dolls at a cent each. I dressed them in crepe paper dresses. These I used occasionally and finally gave them to the little ones to carry home.

There is no end to the devices one can use and much of the material can be made or partly made by the pupils themselves. Cut half size foolscap paper into strips. At the top of each, paste, draw, transfer, or hektograph a picture illustrating the word to be written. By using two sheets of carbon paper one can make three papers at one time.

By such means I kept the first and second grade pupils busy and happy and my other lessons were not disturbed by their wiggings or mischief.—Primary Education.

For The Primer Class.

I have received many valuable hints from your "Helping One Another" page, and should like to tell readers of PRIMARY EDUCATION of one little device which is splendid for Friday afternoons. I use it with my first primer class, and find it both interesting and instructive, as it teaches the children to recognize words very quickly.

I place on the board a story, containing only familiar words, in which part of each word is missing — e. g.:

—y s—s—t—er c—n r—d—n t—e b—g b—k.

M—s—st—r—an r—d i— —he—ig b—o—.

D— —ou l—k t—g— t—sc—o—l?

C—n y—u m—k— a l—tt— f—n?

Only one story should be written at a time, so that all may keep together. The child who reads or writes most stories correctly, is declared winner. If desired, a small prize may be given. This is usually an incentive to work.—Primary Education.

A Useful Motion Song.

"My hands upon my head I'll place
On my shoulders, on my face,
On my hips, then at my side
And now behind me they will hide,
Then I will lift them up on high,
And make my fingers swiftly fly,
I'll hold them now in front of me,
Then I will clap them, one, two, three."

— Exchange.

How to Make Colored Crayons.

Colored crayons are commonly regarded by teachers and pupils as one of the luxuries of the school room. In some schools if they are used at all they must be purchased a few at a time by the teacher. Few people know that the common crayon can be transformed, at slight cost, into as fine colored crayons as any teacher could wish to use.

All that is needed is a few bottles, a cup, and a few packages of "Diamond Dyes." The following colors work well; probably the first five will be all that are needed. Yellow for cotton, eosine, light blue, green, Bismark, garnet, cardinal, red, crimson, violet, purple for wool.

Moisten the dye with a little cold water, then add a pint of boiling water. Keep in bottles for use either for ink, colored crayons, diagrams, map coloring, or any other of the various uses of the dyes not directly connected with the school room.

Use the common school crayons, the soft finish. Place as many as are needed in the cup and pour on dye to cover them. Let it stand about ten minutes. Then pour off the dye, to be kept for further use. Place the wet crayons where they will be kept warm about twelve hours. If the pupils assist in making them there will be an increased appreciation, for children are always interested in things that they can make for themselves.—Teachers' Magazine.

FOR FRIDAY AFTERNOONS.

Applied Mathematics.

I sometimes wonder what's the use
 Of squaring the Hypotenuse,
 Or why, unless it be to tease,
 Things must be called Isosceles.
 Of course I know that mathematics
 Are mental stunts and acrobatics,
 To give the brain a drill gymnastic
 And make gray matter more elastic —
 Is that why Euclid has employed
 Trapezium and trapezoid,
 I wonder? — yet it seems to me
 That all the Plain Geometry
 One needs, is just this simple feat,
 Whate'er your line, make both ends meet!
 — Anne W. Young, in Harper's Magazine
 for September.

A Riddle Rhyme.

I had a saucy servant,
 And his name was Silver Jim.
 He hadn't any body,
 And he hadn't any limb.
 He had a little arm,
 And he had a little wrist,
 And little pointed fingers
 That couldn't make a fist.

He brought me new potatoes,
 And every kind of meat,
 And all the different sorts of pies,
 That any one could eat.
 But all the time I had him —
 A dozen years I think —
 The saucy little rascal
 Would never fetch a drink.

— St. Nicholas.

The Nest.

All day I watched a busy crow
 Who built a deep, soft nest
 With twigs and tiny bits of fluff,
 Where baby crows might rest.
 That night I dreamed that mother made
 A cozy nest for me,
 And that I had a little bed
 Up in a shadowy tree;
 And that I chatted with the birds
 That swung upon the pine.
 Oh, how I wish that dream were true,
 And that the nest were mine!

—Youth's Companion.

Mud Cakes.

I don't see why the big folks all
 Need to go to cooking school,
 For it's easy enough to make a cake,
 If you make it by this rule:

First, you must have an apron
 That you're not afraid to hurt,
 For in this receipt we use,
 For FLOUR, SIFTED DIRT.

Then dig with an iron spoon,
 A hole in the cool dark ground,
 And put in dirt and water,
 Stirring it round and round.

And then a handful of pebbles
 You'd best put into the dough.
 What are these for? In this receipt
 Pebbles are raisins, you know.

And when you get it all thick enough
 And make it into a cake,
 Then put it on a nice clean board,
 And set it in the sun to bake.

Dear me! I'd most forget to say
 You must sprinkle sugar (or sand),
 And when they're done no better cakes
 Will be found in Babyland.
 — Acadian Recorder.

The Puppy.

The Puppy cannot mew or talk,
 He has a funny kind of walk,
 His tail is difficult to wag,
 And that's what makes him walk zigzag.

He is the kitten of a Dog.
 From morn till night he's all agog —
 Forever seeking something new
 That's good but isn't meant to chew.

He romps about the Tulip bed,
 And chews the Flowers white and red,
 And when the Gard'ner comes to see
 He's sure to blame mamma or me.

One game that cannot ever fail
 To please him is to chase his tail —
 (To catch one's tail, 'twixt me and you,
 Is not an easy thing to do).

If he has not a pretty face,
 The Puppy's heart is in its place.
 I'm sorry he must grow into
 A Horrid, Noisy Dog — aren't you?

— Oliver Herford, in Harper's Magazine
for February.

The scarcity of small birds is not wholly due to the millin-
 ers and the boys that go shooting for sport. Great numbers
 of birds fly around lighthouses until exhausted. A special
 apparatus on which they may rest has been devised, and has
 given good results on the Frisian coast.

USEFUL BOOKS.

[THE CONSERVATION OF THE CHILD: A Manual of Clinical Psychology, presenting the examination and treatment of backward children, by Arthur Holmes, Ph. D., assistant director of the Psychological Clinic; assistant professor of Psychology, University of Pennsylvania. J. B. Lippincott Company, 1912. \$1.50.]

This is not a book for schoolroom use, but for the teachers' own study. We recommend it especially to thoughtful teachers in our larger towns, where they are constantly confronted with the difficulties of dealing with backward or abnormal children.

The term 'conservation' is becoming very familiar. To-day the post brings us the fourth Annual Report of the Committee on Conservation, a volume telling of the work done to preserve and turn to their best use our forests, our fish, our water-power, and other natural resources of our country. Dr. Holmes' book tells of the like efforts directed towards the conservation of "our greatest and noblest asset — our children."

The book begins with a short historical sketch of the treatment of abnormal children, and goes on to give a full account of the organization and working of the Psychological Clinic of the University of Pennsylvania. Beginning in 1896 with one boy, this institution for treating and directing the training of exceptional children has in sixteen years examined over four thousand boys and girls. The necessary equipment is described; the qualifications of the workers, the kind of work done, and the actual operation in a special case are all clearly set forth.

The writer then goes on to show how exceptional children are classified. They may be different from the normal child physically, mentally and morally. They may be arrested or retarded in their development. But the great question to be answered is: Are they curable or incurable?

The chapters that describe the method of classification will be of absorbing interest to anyone who has to do with children, especially with young children. Two sets of tests that could be used by any teacher are given in full. The first are the pedagogical tests used at the Clinic. They were secured from the public schools, and cover four grades (grades 2-5, ages, 8-11) of reading, writing, arithmetic, dictation and spelling. The second set are those known from the name of their originators as the Binet-Simon tests, intended for children too young, or who for any reason have been unable to attend school. There follows a set of tests more

elaborate and searching, that could be used only in a psychological laboratory.

The book concludes with a chapter on the antecedents and careers of some of the children treated, and a short biography on the whole subject of defective children.

Where is the usefulness of this book for the ordinary teacher? First, in the broadening of outlook and sympathies that it gives us. The view of what is being done in one place and certainly will be done more generally, by patient and learned investigators, for children, to save them from ignorance and vice, for schools, to set them free to do their proper work, for society, to secure that it shall have no human "waste products," cannot but give us fresh interest and hope in the practice of our profession. The editor of the book, after recording the limitations and difficulties of the public school in dealing with abnormal children, says: "The saving influence in it all has been, and is, the unselfish and beneficent force of teachers, who have faced a critical situation with great fortitude, tact and devotion. They have gone vastly beyond their legal duties in a heroic effort to reach the last child and aid him to his best estate." And now the teacher can see science coming to the rescue.

But besides this, there is much in the book that the teacher can take into the schoolroom every day that will make her work with children of all kinds, not simpler, perhaps, but more intelligent and more sympathetic. The mere careful reading of the tests given, will bring to many a clearer idea of what to expect from little children, and perhaps save much injustice. At what age, for instance, would you expect a normal child to answer correctly the question, "Is this morning or afternoon?" The question, "What is the difference between wood and glass?" To name promptly the days of the week in order without omission?

We are told that the tests can result in nothing of *scientific value* unless applied by a trained psychologist, but they can be used by anyone to estimate roughly the child's intelligence, difficulties and limitations, and so to influence the teacher's methods in dealing with him. It is, however, not only because of the usefulness of the tests that we recommend this book so strongly to our readers, but rather because we believe that no teacher can read it without an increase of understanding and sympathy for children poorly endowed in mind or body, who may be committed to her care.

THE POET LAUREATE.

"The King has been pleased to approve the appointment of Mr. Robert Bridges, D. Litt., to be Poet Laureate."

The King is "pleased to approve," but it is the Prime Minister in our times, who "appoints" the Laureate. But there were Laureates in England before there were Prime Ministers. Chaucer and Spenser are sometimes called "volunteer Laureates," because they wrote poems on public events, were approved and encouraged by the Court, and drew pensions. But the first poet who was regularly appointed to the office was Ben Jonson, who became Laureate in the year that Shakespeare died.

At first the Laureates do not seem to have been bound to perform any regular duties, though they were officers of the royal household and drew a salary. But in the reign of William III the Court poet was required to write every year two odes to the Sovereign, one on his birthday, the other on New Year's Day. These were set to music composed by the Court musicians and sung before the King and Court. When George III fell into insanity this custom ceased, and was never resumed.

The last Laureate who wrote these birthday odes was Henry James Pye. His odes always had many references to "vocal choirs" and "feathered songsters," so a wit of the time wrote about them:—

"When the Pye was opened
The birds began to sing;
Wasn't that a dainty Dish
To set before a King?

The name Laureate was given because of an old custom in the universities of giving a laurel wreath to scholars who distinguished themselves in rhetoric and poetry, and in modern times the Laureates have been chosen because of the beauty of their poetry. But many who formerly held the office were not worthy to be called poets at all, and their names need not be remembered. We have had only five Laureates who are really great poets. They are as follows:

Name	Appointed
Ben Jonson.....	1616
John Dryden	1670
Robert Southey.	1813
William Wordsworth.....	1843
Alfred Tennyson.....	1850

John Dryden was undoubtedly the greatest poet

of his time; but he had to resign his post when William III came to the throne, because he had written strongly against the politics and religion of the party in power.

After him we can afford to pass over the names for more than a hundred years. In the eighteenth century the post was offered to Thomas Gray, the author of "Elegy in a Country Churchyard." It could hardly be called an honour then, as so many worthless poets had held it; and perhaps that is one reason why Gray declined. Then in 1813 Sir Walter Scott refused the office, but there was not lacking a true poet to take it, and with Robert Southey began a more glorious list of names. Southey wrote a number of odes upon public events, but they are not among his best poetry, and add nothing to his fame.

On Southey's death there was no question about who should be Laureate. Wordsworth was undoubtedly the greatest living poet, and he was willing to accept the post, on condition that he should not be called upon to write any poems "to order." He was now over seventy, and had done his life's work, and it was only seven years before his place was taken by Alfred Tennyson.

Tennyson held the Laureateship for forty-two years, and held it worthily. He more than any of those who came before him, was in close connection with his sovereign, and Queen Victoria honoured him with her personal friendship. He wrote many of what might be called "official poems," expressing the joy or sorrow of the nation upon some public event. "The Charge of the Light Brigade" is perhaps the best known of these, but the "Ode on the Death of the Duke of Wellington" is the most noble and beautiful.

After Tennyson came the late Alfred Austin, a much lesser poet, though a true one. And upon his death it was very hard to guess who would be chosen, so many were the writers who have a claim of recognition for the beauty of their verse. Rudyard Kipling, Alfred Noyes, William Watson, Austin Dobson, Henry Newbolt, Alice Meynell and several others were thought of by their admirers as possible Laureates. But Mr. Asquith's choice fell upon Robert Bridges, and those who know modern poetry admit that it is a wise one.

Mr. Bridges was born in 1844, and educated at Eton and Oxford. He studied medicine at St. Bartholomew's and held posts in different hospitals. In 1882 he retired from practice, and has

lived ever since at Oxford, devoting his time to literature and music. His poetry is said to have had great influence "by its purity, precision and delicacy, yet strength of expression." His longer works are chiefly plays, dealing with classical subjects. He has never been a popular poet, but some of his lyrics are fairly well known. A number of them are given in Quiller-Couch's two anthologies, "The Oxford Book of English Verse" and "The Oxford Book of Victorian Verse."

The following lines show something of the poet's feeling towards his art:—

"I love all beauteous things,
I seek and adore them;
God hath no better praise
And man in his hasty days
Is honoured for them.

I too will something make
And joy in the making;
Although to-morrow it seem
Like the empty words of a dream
Remembered on waking."

In his "Ode on the Ninth Jubilee of Eton College," he speaks thus to the boys:—

"Here is eternal spring; for you
The very stars of Heaven are new;
And aged Fame again is born,
Fresh as a peeping flower of morn.

For you shall Shakespear's scene unroll,
Mozart shall steal your ravish'd soul.
Homer his bardic hymn rehearse,
Virgil recite his maiden verse.

Now learn, love, have, do, be the best;
Each in one thing excel the rest:
Strive; and hold fast this truth of heaven
To him that hath shall more be given."

We should like to quote "Winter Nightfall" and "Whither, O Splendid Ship," but we have space for only these few lines:

Thy work with beauty crown, thy life with love;
Thy mind with truth uplift to God above
From whom all is, from whom was all begun,
In whom all Beauty, Truth and Love are one.

Among new materials that may be used for making paper is a grass which grows abundantly in some parts of Africa, known as elephant grass. This may come into use as a substitute for wood pulp; but the paper made from it is not so strong and fine as the Indian paper, which is also made from grass.

DOING HIS BEST.

It was a hot sultry afternoon, and the boys in the class were all fidgetting and lazy. This only made the master, irritable on account of the heat, even more irritable.

Johnney Brown was reading aloud, and reading very badly.

"The captain," he declaimed, stumbling painfully over the words, "as he stood on the bridge as the big ship ploughed her way through the fog, suddenly espied a —"

Johnney paused. The next word was altogether too much for him.

"B-b-b-ba —" he stuttered.

"Get on, Brown!" said the master.

Brown got on.

"B-b-b-ba —" he continued.

"Barque, boy!" roared the master.

"Barque!"

Johnney glanced pitifully round the class-room — then at the master then at the book. Then he opened his mouth and:

"Bow-wow!" he replied. "Bow-wow!"

AUTUMN LEAVES.

"The leaves fell brown and dead upon the streams
And in the many winding woodland-ways.
And the blue haze again upon the hills
And o'er the sleeping waters spread its veil
All faint and dim, and from the misty deep
Of the great stream was heard the lonely cry
Of the solitary loon that lingered still upon its bosom."

— Selected.

CURRENT EVENTS.

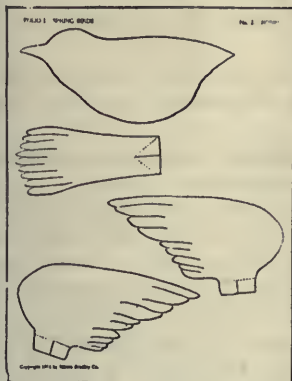
The discovery of a gas that has only one-sixteenth the weight of hydrogen is said to have been made during the last eclipse of the sun. It is called coronium.

A new self-righting flying machine has been tried in France, and found to have great stability. The inventor is a retired officer of the British army.

Explorers have discovered in Western Mesopotamia the remains of the ancient Hittite capital which was in existence there more than three thousand years ago.

The International Medical Congress which has recently been in session in London has called attention to the amazing progress that has been made throughout the world in combating the use of alcohol; though, as one of the speakers said, we still spend the national treasure freely on the production of crime, insanity and illness by this agent. The advances against this national enemy in Germany were particularly noted; and the Kaiser was quoted as saying that the winning navy in the next great naval war will be the sober one.

The meeting of the American Bar Association in Montreal on the first of this month was a notable occurrence, chiefly because of an address delivered by Lord Haldane, the Lord High Chancellor, who had come from England for the purpose. It is described as an epoch-making speech, dealing with the relationship of the three great nations, the



"Birds for School and Home."

"BIRDS FOR SCHOOL AND HOME" is a new device which combines coloring cutting, folding and sewing, and results in a most lifelike bird. Ten plates on heavy paper, each $8\frac{1}{2} \times 11$ inches, shows the outlines of bodies, wings and tails of ten different birds. These are to be colored by the children, cut out and sewn or pasted together. Besides the hand training, the child gains a lasting knowledge of the actual shape and color of each bird constructed.

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United Kingdom, France and the United States; and it is expected to have a permanent effect upon the relationship between this country and the United States, in strengthening the peace and good will that now happily exist, and preparing the way for a closer alliance among the English-speaking nations of the world.

It is stated that among the disadvantages of city life is a serious impairment of the power of attention, caused by noises that confuse, odors that displease, dust that chokes and sights that strain the eyes and irritate the nerves. Among the latter, the bill boards are said to be the worst; and the movement for their abolition is, therefore, not only a matter of good taste, but also a matter of very great practical interest to city dwellers.

Though the second Balkan war has come to an end, and peace has been made at Bucharest, it may be doubted that the peace is permanent. Bulgaria is defeated, and has little left of the lands it had conquered from the Turks. Turkey is left in possession of Adrianople for the present, and Bulgaria is unable at present to retake it. If half the tales of Bulgarian atrocities are true, the Bulgars deserve no pity, and Adrianople is better in the hands of the Turks. But it is generally believed that there will be no lasting peace until the Turkish forces are again driven out of all the territory north of the boundary line assigned to them by the treaty of London.

Our one cent postal cards will hereafter have inscriptions in both French and English, as have the two cent cards.

Mount Brown and Mount Hooker, two very high mountains in the Canadian Rockies according to our old geographies, are said to have no existence. Such is the report brought back by two recent travellers in that region. The man who thought he saw them and who placed them on the map some sixty years ago, may have been in error. Two such mountains are too much to lose at one time. We had better wait for further investigation.

The spruce bud worm is doing much injury in some parts of the New Brunswick forests.

The Stefansson Polar expedition has met with an accident in the ice off Point Barrow, and the ship may have to be abandoned.

Dr. Mawson, the Australian Antarctic explorer, has reached New Zealand; he and his companions having been rescued by a relief expedition just in time to save their lives.

It is still hoped that the British and German governments can be induced to participate in the San Francisco Panama-Pacific Exhibition. Both have declined because trade prospects are not such as to induce merchants of their respective countries to make a creditable display. Switzerland likewise declines on the ground that the United States insufficiently protects foreign patents.

An agreement has been reached between the Canadian and the British governments approving a bill for creating uniform imperial naturalization. When it becomes law, a man who is naturalized in either country will be entitled to the full rights of citizenship in both countries; and we shall get clear of the strange condition of things whereby a man could be a British subject in one place and not so in another.

War in the air was but a few years ago a wild suggestion of the possible development of the airship. To-day it is much more than a possibility. In France, a large fleet of destroyers will be created, to engage an enemy's air fleet. When the air is swept clear of rival craft, vessels of different type and armament can be employed against fortified positions and land forces. Germany already has a fleet of airships fitted for scouting, if not for attack; and Great Britain is providing airships for coast defence.

The Brazilian Government has granted a concession to a Japanese company which is authorized to found Japanese colonies in three of the southern states of Brazil. One hundred thousand or more Japanese colonists who are to settle there will remain quite by themselves, and will have a seaport of their own, which, according to the terms of the grant, is to be inhabited by Japanese only. Five years are allowed for the beginning of the colonization, within which time there must be ten thousand settlers introduced.

Recent discoveries of gold are reported from the Belgian Congo, and some of the reefs are said to be marvellously rich. Some further discoveries of gold in Alaska are also reported. But perhaps more important than either of these is the discovery of an immense tract of oil bearing shale in Newfoundland.

The fall of Nanking, which was captured by the Loyalists on the first of this month, has practically ended the rebellion in China. Government forces are moving against the remaining rebels in the several provinces, but it is not expected that they will meet with much resistance.

Thousands of tribesmen are on the warpath in British Somaliland, under the old leader known as the Mad Mullah.

There is still danger in the Mexican situation, the efforts of the President of the United States to bring about a truce between the provisional government and the northern insurgents being resented by both parties. Meanwhile the time for a general election in Mexico is approaching. This election may give such support to one or other of the two warring factions that its executive can be recognized as the true and lawful government of the country, though Mexican elections in the past have seldom deserved the name of real elections. The southern insurgents are mere bandits, and will not accept the rule of either party.

The International Peace Congress now in session at The Hague has adopted a resolution saying that the differences between the United States and Great Britain regarding the Panama Canal Act should be referred to arbitration.

SCHOOL AND COLLEGE.

As a successor to Professor C. D. Howe the Board of Governors of Dalhousie have appointed J. N. Finlayson, M. Sc., to be Professor of Engineering in that University. Professor Finlayson is a native of Meredomish and got his early education at Pictou Academy. He has had experience as an instructor of engineering at McGill, and as practical engineer in British Columbia.

Another graduate of Pictou Academy and Dalhousie of whom we hear is C. B. Robinson, Jr., who was at one time science and mathematics master in Pictou. Since 1908 Dr. Robinson has been connected with the Bureau of Science, Manila. The Botanical Journal "Torreya" for August has the following note: "Dr. C. B. Robinson of the botanical staff of the Bureau of Science, Manila, left Manila on June 17th for Amboina. The object of Dr. Robinson's trip is to make a thorough botanical exploration of Amboina. He plans to spend about six months in Amboina and the neighbourhood. He has the co-operation and assistance of the Dutch botanists at Buitenzorg, Java." Dr. Robinson, writes that the botanic gardens at Buitenzorg are famous the world over, and excel all gardens in the tropics for the work done there.

Professor Adam Cameron, B. Sc., M. A., Edinburgh, has been appointed to the Chair of Chemistry at the University of New Brunswick.

There have been several changes in the Faculty at Acadia University. Dr. Jones has resigned and become Professor Emeritus; G. H. Waldrop is to be instructor in Greek; John E. Sievers, M. A., and G. Cavicchia, are to be professors of German and French respectively. J. A. Ambler, Ph. D., becomes professor of Chemistry, leaving Professor Haycock

to devote all his time to geology, while A. B. Balcom, M. A., relieves Professor Tufts of the work in Economic Science. Miss Haley, M. A., S. B., University Librarian, becomes instructor in Library Science.

The Board of School Trustees and the physicians of Sackville, N. B., are arranging for medical inspection in the schools.

The School Trustees at Woodstock contemplate establishing a night school in the Fisher Memorial School.

Mr. Frederick C. Manning, son of Dr. James Manning of St. John, and a graduate of St. John High School has undertaken the Principalship of the Sunbury County Grammar School. Mr. Manning, who is only nineteen years old is probably the youngest principal in the Province.

During the meeting of Teachers' Associations in London, in July, under the auspices of the League of the Empire, some thirty Canadian teachers were invited to a royal garden party at Buckingham Palace. Among those who were honoured by being the guests of the King and Queen were Miss Lyle Kennedy and Miss E. A. Wilson of New Brunswick, and Miss Creighton and Mr. and Mrs. Tresery of Nova Scotia.

Both in St. John and Fredericton, the school rooms and teachers were overtaxed at the reopening of school in August. In St. John a new class room had to be opened and an extra teacher provided in the High School for Grade X, while in Fredericton the overflowing of Grades IV and V had to be similarly provided for.

Mr. Walter L. Daley of Elgin, is to be principal of the Woodstock Grammar School.

Misses Etta E. DeWolfe and L. A. Wilson of the St. Stephen, N. B., teaching staff, arrived home on the Saturday noon train from their trip to the British Isles and the continent, on the hands across the seas excursion and resumed their work on Tuesday, September 2.

Miss Florence E. Robertson has joined the St. Stephen staff and is engaged in teaching Grades VII and VIII.

W. T. Denham, B. A., has assumed the principalship of the Milltown, N. B., Schools.

RECENT BOOKS.

The University Tutorial Press sent us a new school edition of *The Tempest*, edited by A. R. Weekes, M. A., and F. Allen, B. A. It is intended for junior classes, and the introduction and notes seem to us well suited for young students. The paragraphs on metre, prose, and Shakespeare's English are particularly simple and concise. (1s. 4d.)

From the same publishers comes a copy of *Le Blocus*, the sixth in that series of historical and patriotic tales in which Erckmann and Chatrian deal with the campaigns of the French Republic and the Empire. The editor, R. F. James, seems to halt between old fashioned and "reform" methods, for he gives English notes, but a *questionnaire* at the end of each chapter. This is a very nice little edition of an interesting story. (1s. 6d.)

Carlyle's Heroes, Hero-Worship, and The Heroic in History. Edited, with introduction, notes and bibliography, by Herbert S. Murch, Ph. D., Princeton University. (Cloth, xlv+313 pages, with portrait. Introduction price, 75 cents. D. C. Heath & Co., Boston, New York, Chicago. The large and

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The number accompanying each address tells to what date the subscription is paid. Thus "317" shows that the subscription is paid to Sept. 1, 1913.

Address all correspondence to

THE EDUCATIONAL REVIEW,
St. John, N. B.

We thank all those subscribers who have so kindly sent us the August numbers of the REVIEW that we asked for last month.

The index to Volume XXVI which, through a misunderstanding, was not published, as is usual, with the June number, is sent out with this issue.

The attention of teachers of Nature Study and Agriculture is directed to our report on another page of Director Steeves' address to the teachers of Westmorland County, and especially to his warning that the work for School Gardens must

be begun in the autumn. The Bulletin of instructions may be obtained from Mr. Steeves at Sussex.

Owing to an unfortunate misprint, the article in our August issue entitled "An Ideal Teacher" was not correctly credited. This testimony to the late Dr. Hay was written by Miss Susan E. Cameron, a graduate of the St. John High School, now Vice-Warden of the Royal Victoria College, Montreal.

In our zeal for utilitarian education, are we in danger of neglecting the training for enjoyment of beauty in Nature and in Art? Dr. Parkin is warning us not to let our young people fix their hopes and ambitions solely on material prosperity. Mr. Vroom pleads for the study of field botany, that we may learn to see the loveliness of the plant in its own surroundings, and he shows us how the study of ferns may train our eyes to recognize the beauty of form. Is not that teaching "practical" which will add to the pleasure of our daily lives?

There is no time in the year when the beauty of our country makes a more startling appeal than in late September and early October. Look where we will, we see a glory of colour in marsh and wood, over hillside and plain. Blue sky, brown streams breaking into foam against gray rocks, maples glowing among the firs, masses of golden brown brakes, birches like splashes of sunlight in the dimness of the evergreens, stretches of swamps all a warm red broken by pools of still, dark water—these and countless other beauties call to us to rejoice in the splendour of the passing year. "It is a fine thing to have a fair land, even though it be a poor one" said Nansen, as he sailed along the coast of Norway on his way to the far North. And we Canadians, while giving thanks on the national Thanksgiving Day for the wealth, peace and prosperity of our country, may lift up our hearts in the words of the Psalmist and say "The lot is fallen unto me in a fair ground; yea, I have an heritage of beauty."*

*Ps. xvi, 6; Jeremiah, iii, 19, margin.

BOTANY

L. A. DEWOLFE.

Too often, a weed is a weed and nothing more. But weeds represent as many botanical families as do cultivated plants.

I shall begin with the Pink family, not only because it furnishes many of our worst weeds but also because the flower structure is so simple. Botanists place this family low among the dicotyledons. The symmetrical flowers show lack of complexity. The small, undivided, or entire leaves indicate the same.

The family is not difficult to identify. Examination of such a plant as a chickweed or a catchfly would help more than any written description. Five petals notched at the apex would put one on the track at once. Even where the petals are not notched, if one finds a plant having the calyx free from the ovary, five distinct petals, not more than ten stamens, attached to the receptacle, and two to five stigmas, it would be wise to turn to this family in your botanical Key. There, one will find details sufficient to remove all doubt.

Common representatives of the Pink family are corn cockle, bladder campion; two or three species of Catchfly; several species of chickweed, mouse-ear chickweed, and stitchwort; sandwort, sand-spurrey and corn-spurrey. Among garden representatives are Sweet William, Catchfly, Bouncing Bet, Pinks and Carnations.

A capital exercise for children would be the collecting of the various species of each genus. Three or four children could be assigned the task of getting a complete collection of this family while other children collect another family. Notes on the habit and habitat of every plant collected will furnish excellent topics for descriptive composition. The fact too, that most of the plants we talk about came from Europe will give one point of contact between botany and geography. Some of them were brought here as garden flowers; some because the first settlers believed they needed medicine, and that many plants had medicinal value; but most of them came as stow-a-ways, hidden among seed grain and flower-seeds. In the same way, plants are still being scattered in all parts of the world. In our own provinces, new weeds appear every year. This is because we import seeds instead of growing them. Many too, are scattered along the railway from hay used to feed live stock on the way from Ontario. What other ways can the pupils think of?

Another common family is the *Ranunculaceae* [Look up the derivation of that big word. This family shows some advance over the Pinks in the evolutionary development of the plant kingdom. Though in general the structure is simple, this is a family of experimenters. Genera, and even species differ so much that one would scarcely believe all could belong to one family. Who would think, for example, that a buttercup, a columbine, and a larkspur should be grouped?

The attempts to enlist the services of insects have led to most of these changes. After all, the differences are largely in appearance rather than in arrangement of parts.

A typical representative of this family is the buttercup. Notice that the numerous stamens and carpels are separate from each other and from other parts of the flowers. This is distinctive. The reader will remember that in *Rosaceae* the petals and stamens were attached to the calyx. Not so, however, in *Ranunculaceae*.

In many genera of this family, the sepals are colored and showy, resembling petals. They really do the work of petals. The latter, in such case, are modified into nectar-bearing bodies; or they may be entirely lacking.

The Goldthread, Monk's-hood and Larkspur are good illustrations of showy sepals and inconspicuous petals. In the Meadow-rue, there are no petals. Here, even the sepals are short lived. This plant is worth careful study for more reasons than one. Examine a dozen different specimens. Are all alike?

The common wild species of *Ranunculaceae* will include clematis, goldthread, meadow-rue, hepatica, anemone, baneberry, marsh-marigold, and eight or ten species of crowfoot and buttercup. Among the cultivated members of the family are Columbine, Clematis, Larkspur, Monk's-hood and Peony. Hellebore, so commonly used to poison insect pests, belongs here.

A third family, available at all times, is *Cruciferae*. It is easily identified by the four petals whose upper half spreads to form a cross. To make identification certain, however, look at the six stamens, and notice that two are shorter than the other four. This arrangement was doubtless an experiment on the part of Nature for better pollination.

Determination of species is easier in late summer; for the differences in pods and seeds are used more than any other characteristic.

Here belong some of our worst weeds as well as some of our most common vegetables and flowers. Among the former are two or three species of pepper grass, two or three mustards, the worm-seed mustard, wild radish, and shepherd's purse. Wild species which are not weeds are toothwort, sea rocket and two or three species of Cress.

Cruciferous vegetables are radish, mustard, turnip, cabbage, cauliflower, Kohl-rabi, and horse-radish. Well known flowers are Stocks, Arabis, Sweet Alyssum, Candy-tuft and Wall flower.

May I urge young teachers who may not know all our common flowers and weeds, to save these lists until next summer? Everything I name is easily found. Learn the family characteristics and, as the season advances, try to make complete family collections. During the winter, read seed catalogues; and order seeds of each cultivated plant I mention. If you have no school garden, grow them at your home or your boarding place. Encourage your pupils to grow them at home. The result will repay the effort many times over.

NATURE STUDY OF ANIMALS.

Suggested studies for the last part of October and the first part of November.

H. G. PERRY.

For general work throughout the grades, use the fish, rabbit and squirrel. For the lower grade each subject (animal) should suggest topics for two or three fifteen-minute lessons; these should be followed by a comparison of the different forms.

In taking up the work on the fish, you should, if possible, provide a small live fish or two in an aquarium, and also several dead specimens of the same species. In providing aquaria no extra expense need be incurred, as large glass fruit jars, candy jars, or other glass vessels serve the purpose very well. If you plan to keep the fish several days, you will have to either change the water several times daily, or, better still, provide your aquarium with a growing water-plant. For this purpose use plants found growing under the water.

In setting up your aquarium, first of all cover the bottom, an inch or two deep, with small stones taken carefully from a pond. Next take some mud and leaves from the bottom of the pond, being careful to disturb them as little as possible, and place upon the stones. Next plant the water-plants mentioned above, among the stones, and then very gently

pour the water down one side of the vessel or along a slanting board, filling to the depth you desire. Place in a cool part of the room where the sun will not shine directly upon it for any length of time, as most fish, tadpoles, etc., cannot live long in warm water. After the mud has settled, and the water has become perfectly clear, put your live specimen in this "pond." You may find it of advantage to tie mosquito-bar over the dish, to keep the fish from jumping out; under certain conditions I have known fish to jump as high as six inches over the sides of a similar prison.

This interesting work may be much extended, and other forms kept in aquaria for observation, and study. Snails, water beetles, fresh-water clams, etc., readily lend themselves to such treatment. In the aquarium for the clam, place in the bottom only clear sand, about two inches deep. Direct the higher grades in this work.

The breathing, swimming, floating, sinking, etc., of your fish, will be of great interest, and provide for your higher grades valuable topics, as the illustrate the application of chemistry and physics to the functions in animal life.

Note and sketch the outline of the body as seen from above, and from the sides. Observe the body covering, the scales, and make a diagram of their arrangement. Study a scale from a dead specimen, sketching and note its texture. How does this covering compare with that of the snake, toad, bird and horse?

Examine closely the sides of the fish for linear markings, and lead your pupils to discover themselves the lateral line, extending from head to tail. Examine scales from this region. Are they exactly like the others. This lateral line is a zone of sense-cells of rather doubtful function. On page 306, "General Zoology," Limville and Kelly, in an account of the fish, we find this reference:—"Along a clearly defined lateral line, the scales are somewhat modified, and beneath them are sense organs, the functions of which have been variously stated. Professor G. H. Parker considers these organs are sensitive to mechanical jars of a low rate of frequency, thus standing between the organs of touch proper and those of hearing."

Call attention to the appendage, the fins, both the medial and the paired. Diagram the fish on the black-board, marking in and naming these as well as other parts, such as the mouth, nose, eye, ear region, and the gill-covers and gills.

From the movements of your aquarium specimen learn something of the fins in swimming. Which supplies the motor power ?

Determine the use of each, the back or dorsal, the tail or caudal, the ventral or anal, and the two sets of paired fins; those next the head are the pectoral fins, the others, the pelvic fins. Some fish have more than one dorsal fin, in which case the one next the head is called the anterior dorsal. For fin modification examine the dorsal fins of the perch of our rivers and lakes, and the little stickle-backs from along our coasts. The sturgeon, dog-fish, shark, etc., show a different shaped caudal fin. Examine pictures of these and other fish.

Note the position and shape of the eyes. Are they provided with movable eyelids? Why not? Just back of the eye is the ear-region. Is it indicated in the surface? Read up in some good text-book on zoology an account of the ear of the fish, and its functions. Examine the mouth for teeth, they are readily detected in some species. Note the tongue, and looking farther back, the gill arches. Note their extent and attachment above and below. How many arches are there? Lift the gill-cover and examine the arches from the outside. What is the color of the arch, what, of the attached fringe-like part? What gives it its red color? What is the function of the gills? How is the same function performed for higher vertebrates, as dog, horse, bird and man? From what do fishes get their oxygen? How do land animals get their supply? How is the oxygen held in the water? Does this suggest an explanation why you must either change the water several times daily or else provide your aquarium with a growing water-plant? Give the explanation in each case. These and similar topics provide valuable exercises for the more advanced grades.

For the lower grades correlate this work with the geography of the country, by making lists of your more common fish, and the coast waters (if any), lakes and rivers where they are found.

The intermediate and advanced grades may, in a similar way, extend their studies to the Provincial and Dominion fisheries. Maps should be drawn showing the location of our coast, river, and lake fisheries, and the grades directed to the periodic movements of fish along our coast, and in inland waters. They should learn something of the laws regulating the fishing industry, especially those

enactments mentioning fish found in their locality, and the reasons for closed seasons, etc., and so come to have a wholesome respect and a due appreciation for law and rules.

Something should be attempted in the higher grades respecting the value of our fisheries. The Canadian Year Book contains valuable information along this line, and the Dominion Fisheries Report will tell of the work of the Government for their preservation and extension. Encourage the use of such literature.

It is impossible in our short space to outline a similar detailed study for the squirrel and the rabbit, but the teacher should adjust and arrange similar topics for each of these animals.

A caged squirrel presents some advantages for initial work, especially for the younger pupils of the lower grades. Be content to give these little people a few facts. Its shape, color, (above and below) size, body covering, the position of its body and tail while eating, how it holds its food; how it escapes from its enemies, how it runs and climbs, and jumps from tree to tree; its food, its industry etc., are topics of interest; Extend these for intermediate and higher grades, *e. g.*, under shape and coloring, you should lead your classes to appreciate how well the long slender body is adapted to the active climbing life it lives, and note its "protective coloration." Does this aid it in escaping from its enemies?

The Chipmunk, a cousin of the Red Squirrel, should, if time permits, be considered with it. Its smaller size, striped coat, and modest habits, are distinguishing points. It hibernates during the winter, living on the food, mostly grain and nuts, stored during the fall. Does the Red Squirrel store food too? Does he hibernate?

What is the food of the rabbit? How does he prepare for winter? Name some of his enemies, and point out some protection he enjoys. Tell something about the pest these animals are in Australia, and explain why they cause no serious trouble in this country. Lead your pupils to see that Nature imposes heavy fines upon man for disturbing her balance. As example, instance the pest of the English Sparrow, and of the Brown-tail and Gipsy Moths.

The intermediate grades may also take lessons on the preparation, in general, of animals for winter, the insects, the bear, the weasel, the wild-goose, etc.,

The intermediate and higher grades may combine some work in our domestic animals, as the cow, and sheep.

Show that there are two chief uses for Cattle — the production of beef and the production of milk — and that the various breeds found in your section fall naturally under these two classes.

The chief beef breeds are Short-horn or Durham, the Galloway, the Hereford, and the Aberdeen-Angus; the dairy breeds, the Jersey, the Guernsey, the Ayrshire, and the Holstein.

Note the original use of the horns, how under directive breeding they have tended to diminish, till to-day we find short-horned and hornless breeds.

Diagram a cow on the board, and name its chief external parts. Compare the parts structurally with those of the dog, and hen.

Examine the teeth of the cow, and compare the teeth of the dog or cat. The sharp front teeth for biting are called incisors; the back teeth are broad and formed for grinding and are known as molars; while between these molars and incisors are long and rather sharp teeth, called the canines.

In the cow the number of upper and lower molars on each side is six. This is represented by the formula;—

Molars $\frac{6}{6} - \frac{6}{6}$, Fill out similar formulae for the incisors and canines.

Which are absent from the upper, and which from the lower jaw? Make similar formulae for other domestic animals.

Observe the horse and the cow in the pasture. Which can crop the shorter grass, and why?

Diagram a side of beef on the board. Drill your scholars in its general shape, and especially in the cuts it contains. Which cuts yield the finer and which the coarser meats? What is the price of each per pound? Is there more food value in a pound of the high priced Sirloin or Porterhouse steak than there is in the comparatively cheap flank? If not, then why do we pay the higher price? Teach your pupils that by exercising a little care in cooking, these cheaper meats can be made quite as savory as the higher priced cut. This will tend to keep down the meat bill, it is good economics, and first rate economic nature-study.

Throughout this article, "lower or primary grades" is meant to cover grades I, II, III; "intermediate grades," IV and V of our country school; and "advanced grades" all grades above those.

CENTENNIAL ANNIVERSARIES OF THE WAR OF 1912.

J. VROOM.

XVI.—The Battles of Chateauguay and Chrystler's Farm.

October 26.—The Battle of Chateauguay, in which a few French Canadians turned back an invading force of ten times their strength, may well be regarded as one of the turning points of Canadian history. It saved Montreal from attack and probable capture, for the city was then as defenceless as it is to-day; and it proved to friend and enemy that the French Canadians were loyal British subjects, ready to fight for their allegiance, and as brave as they were true.

The famous battle was but a skirmish, so far as numbers are concerned, and is generally not even mentioned in United States histories; but in its heroic action and in its results it was a great and decisive victory, to which Canadians may still look back with pride. Its hundredth anniversary will be celebrated on the old battlefield and elsewhere; and those who cannot join in the celebration may at least recall the story.

The army of the north, the largest of the three armies that threatened our southern frontier, had remained comparatively inactive during the summer of 1813. Early in September it began to move for a concerted attack upon Montreal.

It was in two divisions; one at Sackett's Harbor, under General Wilkinson, who had succeeded General Dearborn in chief command; the other at Lake Champlain, under General Wade Hampton. Wilkinson was to follow the St. Lawrence to a point just above Montreal, where, according to his plans, Hampton was to meet him, reaching the place by the best route he could find.

As the stars in their courses fought against a warrior of old, so the weather seems to have fought against the invaders. Hampton chose the most direct route towards Montreal, and advanced along the Richelieu River; but he was soon compelled to retreat because of the want of water, owing to an exceptional drought. Returning to Lake Champlain, he then moved to the westward; and by the middle of October he was encamped with his army a few miles south of the boundary line in the upper waters of the Chateauguay, a tributary that enters the St. Lawrence near the appointed place of meeting. Here he remained for some time, waiting for Wilkinson's movements, which were delayed

by storms, and leaving the Canadians uncertain as to which route he might take. On the twenty-first of October he again crossed the boundary, coming down the valley of the Chateauguay; and on the following day he encamped on Canadian soil to gather his forces, having learned that the Canadian leader, de Salaberry, was waiting to give him battle.

Major de Salaberry had chosen a position on the northern bank of the Chateauguay, about twenty miles from its mouth. Wooded hills and ravines made the place easy to defend. He had with him some three hundred men, besides the Indians who were scattered through the woods to the number of nearly two hundred. In addition to these, six hundred men, chiefly French Canadians under command of Colonel Macdonell, the hero of Ogdensburg, arrived the day before the battle, and were placed a little farther down the river to form a reserve. Hampton, according to the lowest estimate, had from four to five thousand men. The number actually engaged in the fight is given as three hundred and fifty on the Canadian side and three thousand five hundred of the enemy.

On the evening of the twenty-fifth, Hampton sent out a strong detachment under Colonel Purdy, who was to keep to the south of the river until he reached a ford just below de Salaberry's line of defence, and there to cross at dawn and attack the British from the rear. As soon as his firing was heard, a stronger force, under General Izard, was to attack the front. Hampton remained himself with his reserves.

Purdy's guides, perhaps intentionally, led him astray; and his men got lost in the woods, where they passed a miserable night in the rain. It was after mid-day on the twenty-sixth when they got to the ford. Izard had advanced slowly, waiting for the signal.

About two o'clock the battle began. The guard at the ford was driven back; the British pickets on the north side of the river, as had been arranged, retired behind a barricade which had been thrown across the road; and Izard's men pressed forward, thinking this the beginning of a general retreat. But de Salaberry held his ground, and ordered the boy bugler at his side to sound a call. Macdonell answered with a bugle call, and came forward with his men to hold the ford. Some accounts say that other bugles were heard from different directions, all sounding the advance. These and the war

cries of the Indians alarmed the invaders, and caused them to fall back in confusion. Those on the south side of the river again got lost in the woods, where they mistook each other for enemies, and were completely disorganized. Hampton recalled the others and made no further effort to advance. Two days later he began his retreat, and by the first of November he had reached his old place of encampment south of the boundary line.

The sequel to this story is that of the battle of Chrystler's Farm.

November 11.—Chrystler's, (now spelled Chrysler's or Crysler's), is on the Canadian bank of the St. Lawrence near the head of the Long Sault rapids, and not far from the point where the river becomes the international boundary. At the latter point, on the southern side, is the village of St. Regis, the lowest point on the river that is not in Canadian territory.

Hampton, having reported his reverse at Chateauguay, received a despatch from Wilkinson on the seventh of November appointing St. Regis as their place of meeting. He refused to comply with this arrangement, and continued his retreat to Plattsburg, giving as his reasons a lack of provisions and the unfitness of his troops for active service.

Meanwhile Wilkinson, still vexed by winds and storms, had not started on his way down the St. Lawrence until the fifth of November. He passed Prescott on the night of the sixth, and on the ninth he had reached the head of the rapids. There was unavoidable delay in passing the rapids; and his rear guard was overtaken on the morning of the eleventh by a British force that had followed, consisting of about eight hundred regulars and militia under Colonel Morrison.

Wilkinson had an army of seven thousand men, many of them yet at the head of the rapids and on the Canadian shore. He sent one thousand eight hundred of them to drive back Morrison's force; and later added six hundred, so that they outnumbered the British three to one. The fight took place in Chrystler's field. It was a sanguinary engagement, in which one-fifth of the British were killed. The invaders lost more men. The capture of one of their guns decided the day, and they retired or were driven from the field. Later they were compelled to take to their boats and cross to their own side of the river. The victors won glory,

but no great advantage; for Wilkinson kept on his way with the loss of but three hundred men. When he reached St. Regis, however, and found that Hampton was not there to meet him, he abandoned the campaign against Montreal and went into winter quarters.

A monument marks the site of the victory at Chrystler's Farm. For the victory at Chateaugay, de Salaberry received the honor of knighthood. It is not for us to say that the invaders failed on both occasions because of the inefficiency of their leaders. We may rather say that they might have succeeded by numbers alone, but for the valour of the defenders; who, in saving the chief city from attack, repelled the most formidable invasion of the war, and perhaps saved Canada.

WHEN TO CRY.

There are millions of children in the world who want to do just the right thing and the very best thing, but they do not always know what just the right thing is, and sometimes they cannot tell the very best thing from the very worst thing.

Now I have often thought that there are children who cry, now and then, at the wrong time, and I have asked many of the older people, but none of them could tell me the best time to cry.

But the other day I met a man older and wiser than any of the rest. He was very old and very wise and he told me.

"It is bad luck to cry on Monday.

"To cry on Tuesday makes the eyes red.

"Crying on Wednesday is bad for children's heads and for the heads of older people.

"It is said that if a child begins to cry on Thursday he will find it hard to stop.

"It is not best for children to cry on Friday. It makes them unhappy.

"Never cry on Saturday. It is too busy a day.

"Tears shed on the Sabbath are salt and bitter.

"Children should on no account cry at night. The nights are for sleep.

"They may cry whenever else they please, but not at any of these times, unless it is for something serious."

I wrote down the rules just as the old man gave them to me. Of course they will be of no use to the older boys and girls. The wise man meant them for the little ones—the millions of little children who want to do the right thing and the very best thing.—St. Nicholas.

NOTES ON HIGH SCHOOL LITERATURE.

Tom Brown's School Days at Rugby.

In the REVIEW for October, 1911, rather full notes were given on "Tom Brown," and teachers are referred to these for the writer's idea of how the book may be studied. Additional notes on this book have however, been particularly asked for, so we shall take them up this month and leave further discussion of Cowper until November. While reading "Tom Brown," students might also, for variety, be learning by heart some of the selections from Cowper that were suggested in September. Or they might memorize Matthew Arnold's "Rugby Chapel," or portions of it.

Hughes avows, in his preface, that his whole object in writing "Tom Brown," was to get the chance of preaching. However that may be, it is not now read as a sermon, but as a story, and an excellent story. So we may safely cut out the bits of direct preaching that interrupt the narrative. They are of interest and value to the maturer reader who wants to know Hughes' opinions of the evils and difficulties of his own time, and how he thought they could be mended; but to the boy or girl who is just beginning the study of literature, they are, as I said, an interruption, and may be a hindrance.

I should be guided altogether by the ability of the class in dealing with Chapters I and II. If they read fluently, and have some taste for good English, I should certainly read all of the first chapter for the sake of the racy and intimate descriptions of the writer's own country; and I should press home the passage beginning "All I say is, you don't know your own lanes and woods and fields."

But with a slow class, I should get to the story as quickly as possible. It is plain that in these opening chapters Hughes was dwelling on the scenes, people and customs of the White Horse Vale quite as much for the pleasure of expressing his own love of his home surroundings, as to bring out any points about his hero. So be satisfied if the place and time are gathered from chapter I.

"In those days," "twenty years ago" when was that? In what year did Hughes write the story? Notice and collect all the references to the time of the action. Hunt out the places—the country of Berks at least, on a map of England.

Leave out the following passages. In chapter II, from "That's a fair true sketch" to the end. In

chapter III, "Now the theory" to "when they are at play and rest." The rest of the "preaching" is, I think too closely woven into the story to be left out. Moreover, most of it is addressed to boys, and not to reformers or teachers. But, I would not dwell upon it.

Of course the pupils must understand clearly the difference between the terms "Public School," as used in this country, and in England. It is explained in the note, page 271.

The first three chapters are an introduction. The real story begins with chapter IV, where there is a distinct change from descriptive style to that of narration, a settling down, as it were, after an easy stroll, to a steady trot. And the last chapter is a prologue.

The story shows us a boy's life at a real and famous school, and gives us a portrait of a real and famous headmaster. The story is excellently constructed, and the characterization well done. A study of the book as a whole is given in our former notes. The following points may be taken up for home work and for oral composition.

Study the quotations at the head of the chapter. Find out where each writer lived and what was his chief work. Explain how each heading bears upon the chapter.

Give the gist of Mr. Brown's advice to Tom the night before he went to Rugby. What did the Squire want Tom to turn out to be? Compare Tom's own answer to Arthur's question "What do you want to do here?"

What fault had old Brooke to find with the Schoolhouse?

Tell how his fears were justified. What did he say about the Doctor?

How did Tom pass his first Sunday at School? Describe the game of hare-and-hounds.

What work did the lower fourth have to do? Compare it with work done today by Canadian boys of the same age.

Tell about Tom's personal knowledge of the Doctor, beginning with his first sight of him.

Why is the story divided into two parts? What does each part show?

Make two lists of the characters, dividing them into "Major" characters, essential to the story, and "Minor" characters. In which list do you put (a) Mrs. Arthur? (b) Diggs? (c) Martin?

Describe the three different methods of study followed by Tom, Martin and Arthur.

What was the guard's description of Rugby? What is Hughes' advice about fighting? Why did Tom think that East would make a good officer?

Describe the ceremony of "calling over." What songs did the boys sing? How many of them have you ever heard?

Explain the following, and use them in sentences.—cicerone, homely, (in the sense used, page 165), praepostor, spinney, itinerant, opodeldoc, Balliol, Medes and Persians, redoubtable, Argus, Ishmaelite, elegiac, vicarious, depredators, preposterous, refute, malice prepense, a leg-bye, nem. con. carte blanche, toco, delinquent, dramatis personae.

ARITHMETIC ON THE BLACK-BOARD.

For Senior First Book Children.

J. M. NIVEN.

To train the children to make their figures large, and to make them well, I arrange on the blackboard a series of examples. One day it may be Addition, another day it may be multiplying consecutively by 2, or it may be a lesson in subtraction. As many children as can be accommodated at the black-board are sent up, and given a piece of chalk. At a given signal they start working. I only allow a certain amount of time, and if the figures are not well made no credit is given.

As soon as a child is finished he puts his initials at the bottom of his example, and steps forward in line as the two in the picture have done.

As I repeat the examples after having put down three or four, it is not much work for me to know



who have correct answers, and the children cannot possibly copy.

At first the figures used to be made very small and indistinct, to say nothing of being on the slant, but with this practice there has been very great improvement.

While the children are busy at the board, the remainder of the class are going on with their regular work.

I mark on the black-board the number whose examples were correct. On another line I mark the number whose figures were well made, even if a mistake has been made in the work.

These children then take their seats and another row replaces them at the front, and so on until every child has had an opportunity to work.

The children benefit in many ways from a lesson such as this. They gain in self-confidence, for some who are too diffident to go up to the black-board and work an example by themselves, do not mind at all, when they have company.

They gain also in control of their movements, as they pass to and from the black-board in as quiet a manner as possible.

It is also excellent eye-training, for when all the children have completed their work, a minute is allowed in order to select the one whose figures are the plainest. Thus they can compare their own work with the one chosen and be stimulated for future work.

TEACHERS' INSTITUTES.

One hundred and eighty teachers of York, Sunbury and Queens Counties met in a United Institute at Fredericton, September 18th and 19th. At the opening session Alderman Farrell welcomed the teachers on behalf of the city. The President, Inspector Hanson, in an excellent speech, urged the members of the Institute especially the younger teachers, to take part in the discussions. This appeal was seconded by the Chief Superintendent of Education in his address. Dr. Carter addressed himself particularly to the teachers of country schools and drew attention to their great opportunities. Among the improvements which he hoped would be introduced before long, he mentioned:—School gardens with every country school; general household science teaching for girls; elementary handwork in the lower grades, essential as a foundation for technical training; and a Summer School in New Brunswick, where special attention might be given to domestic science and school gardening.

At the second session, Mr. J. B. Daggett gave a very optimistic and interesting address on "Agriculture in the Schools," dwelling upon the great importance of agriculture as the basis of all industrial prosperity. He was followed by the Chief Superintendent, who quoted some facts to show the interest taken in Agricultural Education by the business men of the United States. A discussion on school gardens was ended by a short account by Miss Hester Sleep of the garden at her school at Dunn's Corner.

A short and very practical address was given by Mr. H. H. Hagerman of the Normal School, on School Hygiene. Mr. Hagerman insisted on more careful cleaning of schoolrooms and gave directions for sweeping and dusting rooms in a hygienic way.

On Friday morning, Arithmetic was the subject of interest. Dr. B. C. Foster gave a clear and interesting talk on the Teaching of the G. C. M. by long division. Much discussion followed, chiefly on the question whether it was best to teach the underlying principles when G. C. M. was introduced in Arithmetic, or to defer that until it came up in Algebra in a higher grade. Some teachers contended that the course in Arithmetic was so full that methods only, and not principles could be taught. Chancellor Jones of

the University of New Brunswick asked the pertinent question, "Are we doing too much to save the child from thinking?" Miss A. M. Harvey gave a lesson on a useful device in teaching long division.

In the afternoon the teachers listened to an excellent address on Physical Training by A. S. Macfarlane, M. A. Mr. Macfarlane's explicit directions were very valuable, and we hope to reproduce some of them at another time. They all tended to illustrate and emphasize his main contention, that physical training should be educative, and that the teacher, in order to produce the desired effect, must know the object of each lesson, and the correct progression from easier to harder.

Professor Miller, of the University of New Brunswick, in a paper on Forestry, showed how this subject could be incidentally taught along with other studies, especially with geography, nature study and history.

Dr. Keirstead of the University briefly addressed the teachers, telling them that nothing in pedagogy could take the place of a sympathetic relation with the child.

A very interesting half hour was spent in discussing "Teachers' Problems" drawn from the question box.

Resolutions were passed expressing regret at the loss of Dr. John Brittain, Dr. G. U. Hay, and Mr. J. F. Alexander. It was moved that the York County Institute meet every year instead of every two years, and after the passing of this motion the meeting adjourned.

The officers elected for the ensuing year are: President, Mr. Frederick T. Manning; Vice-President, Miss Lulu Hallett; Secretary-Treasurer, Miss Ella L. Thorne. Additional members of Executive:—Miss Ethel Boyd, J. A. Hughes, Miss Jessie McKnight.

The meeting of the Westmorland County Teachers' Institute was held at Shediac, September 25 and 26, when about 115 teachers enrolled. The President, Mr. H. B. Steeves, took the chair. The first address was given by Mr. James A. Starrak, on Manual Training as adapted to the Country School. Mr. A. D. Jonah of Sackville then read a paper on What may be expected of Schools in Agricultural Training. Mr. Jonah gave some examples of simple and practical experiments that could be made in the school-room. After refreshments, served by the ladies of Shediac, had been enjoyed, the meeting adjourned until the evening, when a public meeting was held in the Assembly Hall of the High School. After the address of welcome, a musical programme was carried out, and addresses were made by R. P. Steeves, Director of Elementary Education, and others.

On Friday morning, the session was opened by the reading of an instructive and delightful paper by Miss Mabel Dixon of Sackville, on How to

Secure Expression in Reading. This paper was so highly appreciated that an encore was called for, and Miss Dixon responded by giving an amusing recitation.

Director R. P. Steeves then gave an important address on Nature Study and School Gardening. A part of his advice may be summarized as follows: Do not think that you must know all about nature study before you begin to teach it. Use your five senses; study together with your pupils; keep records; make use of what children know when they first come to school; do not begin with books, but work towards them; do not expect to cover all the Nature Study Course laid down; but select that part for which you can get material, or in which you can best interest your pupils. As for school gardens, remember that they must be educative; the object is not primarily to raise crops, but to train the child. Do not begin a school garden until you have secured the support of the trustees and of some leading citizens. Begin to plan your garden *now*. Interest the children and have them make their plans through the winter. Send to Director for literature, and apply during the winter to the Department of Agriculture for seeds.

Much interested discussion and many questions followed Director Steeves' address.

In the afternoon a short and practical paper on Nature and Animal Study was read by Miss L. Annie Steeves, and a full discussion on Home Lessons was led by Mr. E. D. McPhee.

The officers elected for next year are:—President, Mr. A. D. Jonah; Vice-President, Miss Ethel Murphy; Secretary-Treasurer, Mr. S. W. Irons. Additional members of Executive, Miss Grace Harper, Mr. E. D. McPhee.

Sackville was decided upon for the next meeting-place, and the Executive were empowered to invite the teachers of Cumberland County, N. S., to join in this meeting.

The Alumnae Society of the St. John High School are giving an unusual opportunity to the people of St. John and the neighbourhood, in bringing Mr. Alfred Noyes to the city. Mr. Noyes is well known, not only as one of the first rank of modern poets, but also as an advocate of peace. His lecture, which is called "The Great Green Table," is on the subject of peace, and it is understood that he will also read from his own poems. Everyone who is interested in literature ought to second this effort of the society by being one of the audience at the York Theatre on November 4th.

The price of radium has risen because of an unprecedented demand. It is now said to be worth one hundred and fifteen dollars a gram.

P. E. I. SUMMER SCHOOL FOR TEACHERS.

The first Summer School for Teachers organized by the P. E. I. Department of Education, was held at Charlottetown, July 28th to August 9th. The aim of the Department in organizing this school, was to enable the teachers to become better qualified to teach elementary agriculture.

The attendance at the school was very satisfactory, upwards of two hundred and sixty teachers were enrolled, being about fifty per cent. of the teachers of the province.

The work of the school was based upon Brittain's Elementary Agriculture and Nature Study. Five hours each day were devoted to class work, in addition to which the afternoons were devoted to field work when excursions was taken to points of interest, such as the Experimental Farm, etc.

Besides the purely agricultural work, classes were held in drawing, music, methods in teaching, and physical training. An interesting course of evening lectures was delivered.

The teachers who attended the course had their railway fare paid for them by the government, and those who completed the course received a bonus of \$5.00.

The expenses attendant upon this course were defrayed by the Agricultural Department out of the special grant received from the Dominion Government for agricultural purposes.

The course was a very successful one, and the government is to be congratulated on the success of their first venture in conducting a vacation school.

A COMPOSITOR'S TROUBLES.

The following story is too good to be lost. Not only does it graphically illustrate the sort of thing that the compositor occasionally is expected to understand, but it throws an interesting light on the English language itself, as the sentence which puzzled the compositor is perfectly good English, although at first sight it reads like gibberish.

An author had written an essay on the English Constitution, so the story goes, and on receiving a proof, noticed that the compositor had omitted a couple of spaces in one sentence, running the words "king and queen" together as follows:—

KINGANDQUEEN.

The author's marginal note was as follows, and it is said that the compositor's breath was completely taken away until the meaning of the correction dawned on him in time to save his life:

"Please leave more room between King and and and and and Queen."

FOR THE PRIMARY DEPARTMENT.

PAPER-CUTTING IN A PRIMARY ROOM.

No person will need to do more than take one backward look into childhood days to realize how much the children of to-day will enjoy paper cutting. Do you not think that they will enthusiastically put their utmost effort into it?

We have passed the stage when we need to insist upon the fact that the hands of our children should be trained. Paper cutting, as a means to this end, should not be overlooked. It also puts another medium of expression into the hands of the children. For paper cutting will do for small children all that drawing can do and a very great deal more. Any teacher can sum up the benefits without enumeration here.

How shall we start about this work? First, the use of the scissors must be mastered. Cut long strips of newspaper or colored paper four inches wide. Cut across this strip, and we have material for chains. Cutting pictures from magazines is another way. This is often not satisfactory, as the pictures are too intricate. But there is our old friend, the hectograph, to fall back upon, and it really is less trouble to prepare outlines on paper from a hectograph than to hunt up magazines. Another feature of this plan is that the cuttings are of some value. For instance, an apple outlined, cut, and colored by the children, or a flower, say a tulip. When you are teaching your lessons about Dutch children, why not have a border of tulips colored at the top of your blackboard? Paper pasted on the blackboard can be washed off easily, and your blackboard re-decorated with the children's work. Even white paper is very effective for blackboard decoration. One teacher hectographed reindeer, which on account of the branching antlers required careful cutting, also a Santa Claus in a sleigh. When the children had finished cutting and had assisted the teacher to paste the pictures upon the board, their delight knew no bounds.

From this we come to free-hand cutting — simple forms first, fruit, vegetables, household articles, and so on. Some supply houses furnish designs of animals — solid black with a white background — which are a wonderful help toward accurate cutting; and so the results are much more pleasant and satisfactory for all. Then stories can be illustrated. In January, what fun to cut out a big white bear or an Eskimo house!

Then perhaps we shall try a picture. This will require continued lessons in preparing material for it. In the arrangement all sorts of opportunities present themselves for originality. Suppose we are studying Hiawatha; we'll make his home. We do not need to quote Longfellow's description. Hiawatha lived in a wigwam; let us make it. Wigwams are smoky-looking; so the top must be colored brown. Behind the wigwam was a forest, and we shall need many trees; so they are cut and colored. Now that we have trees and wigwam, we are ready to make our picture. Let us take our paste and mounting paper. Can any one hear in fancy, "Please teacher, where is the "Big Sea Water?" Now where shall it be? At the right, or the left, or across the front of the picture? Let the child decide. With his blue crayon he will soon overcome this difficulty. One thoughtful boy has cut a stump to paste in, also. Another thinks a canoe should certainly be on that "Big Sea Water." And so the suggestions keep coming in.

What use can the rural school teacher made of this? What should it not mean to the poor little first grade pupils who are inevitably left to their own devices a great deal of the time? A pair of blunt scissors suitable for paper cutting are worth ten cents, probably a dollar a dozen. White paper can be purchased cheaply, done up in a large roll and commonly called "pantry or shelf" paper. Library paste is convenient. Next, the hectograph, here is the recipe.:

I lb. glycerine, 2 oz. gelatine, 1 oz. granulated sugar, 1 pt. water. Heat glycerine and sugar in a double boiler, dissolve the gelatine in the water, then add the glycerine, stirring as little as possible. When it has boiled and gelatine is all dissolved strain into a pan through cheese cloth. Do not use for a few days. After using, rinse the ink off with boiling water, tipping the pan so that it will drain off quickly.

For a small class, a few sheets of carbon paper will save the trouble of making and using a hectograph.
—WESTERN TEACHER.

An old subscriber, writing from Philadelphia says "I am so glad that the REVIEW is to be continued. There is so much in it, that is both useful and interesting. I like it all, and among other things I value very much the notes on Current Events. They give the sum and substance of the world's news in such a concise way."

SEAT WORK WITH LETTERS

Teachers who cut out or hectograph letters for the children may find it useful to know the relative frequency with which the different letters occur. According to Edgar Allan Poe, we use the letter "e" oftener than any other. Then follow, in order of frequency, a, o, i, d, h, m, r, s, t, u, y, c, f, g, l, m, w, b, k, p, q, x, z.

Write or print the child's name in a vertical line at the left of a page in the exercise book, or a sheet of paper, or lay the letters in a vertical line on the desk.

Let the children fill out each line as far as they can, with words beginning with the same letter. Thus:—

IN, IT, IS, IF.	HE, HIM, HAT.
ON, OF, OUT, OFF, ONE.	AN, AT, AS.
NO, NOT, NOW.	RAT, RAN, ROW.
AN, AT, ARE.	RAY, RUN, RED.
	YOU, YET, YES.

Let the children make with their letters all the names that they can spell of,

- (a). Things in the room.
- (b). Children in the room.
- (c). People at home.
- (d). Animals and flowers.
- (e). Things to eat.
- (f). Things to wear.
- (g). Things to play with.

This work may also be set for older children after they can write fairly well, to be done in writing.

A SPELLING GAME.

I find this very helpful in teaching little folks how to spell new words, and drilling on old ones.

Give a sentence and spell the word you want learned—thus:

The man is on the w-a-g-o-n and the f-l-o-w-e-r is in the vase—letting the children think of the word you've spelled.

They are soon able to make up sentences of their own and spell the words for the others to guess—and they will learn to spell new words just especially to give the others.

Keep count of the number of times each child makes a correct guess, to see who wins.

The children enjoy it and at the same time get the needed drill. Be sure to always call it a game though; I find that most children dislike the word "drill."—POPULAR EDUCATOR.

FIRST PRIZE LETTER SUMMER SCHOOL OF SCIENCE.

HALIFAX, N. S., July 24th, 1913.

S. A. STARRATT, Esq.

Pres. Summer School of Science.

DEAR MR. STARRATT:—One is apt to take their experiences more or less as they come along, enjoy the pleasant sensations, regret the unpleasant ones and let them pass on their way with perhaps a feeling of gratitude for the good that was in them, or, more likely, with a "O-there-they-go-what-comes-next" spirit. The Summer School in its wisdom, has called a halt on these careless feelings and has asked the point-blank question "What has the Summer School done for you?" and in common courtesy we, of the pupils' desks, must answer when we are addressed.

I entered the School reluctantly at the end of a hard year; I was weary and wanted only rest and sunshine and the freedom to do as I pleased, but, because I felt that I must do my part as a citizen of Halifax and lend at least my presence as a sort of "Thank you" to the strangers who had chosen my beautiful home city as their seat of learning, and because the Supervisor (who is wiser than we sometimes wish to think) seemed to desire it so earnestly, I shook off my laziness and, with great reluctance, enrolled as a pupil. Is it sufficient apology for my lack of enthusiasm to say that I am enjoying every moment of my stay among you, and to promise to go next year unless some unforeseen accident intervenes?

The School has been to me a revelation. With the exception of the Literature, the subjects I am studying are altogether new, and I am getting the impressions that come only with the first doing of things.

Until the other day, to me, a farm was a field, or several fields, in which some strong men worked digging the earth, planting seeds and pottering about waiting for sunshine and rain to make his plants grow. Then he gathered his harvest and stored it and waited until it was time to begin all over again. That, with modifications, was my conception of the Science of Agriculture. Now my view is broader and I know (what before I merely accepted) that the Wonderful Scientist has spent thousands of years preparing to make that harvest possible. The thought is not new, of course, but the meaning is clearer, and today mountain peaks

and my tiny garden plot have a very much closer relation to each other than I ever dreamed of.

Wonderful as this all is, it is the Botany that has brought me to my knees and bowed my heart in humbleness before the Most Marvellous. That God Almighty should be interested in the making of worlds is not difficult to understand, but when I learn the beautiful, delicate, minute perfection of a tiny cell, so small that my eyes can hardly see it, and when I know that that wee thing is throbbing with life, then do I walk in holy places indeed, and wonder, and worship.

In the Literature classes too, I have been dwelling in the midst of beauty. New songs have been singing themselves into my heart. Old songs have taken on new meanings. Slumbering ambitions have been awakened. The world has become a more beautiful place to live in and a wider field to work in.

So much for the work. Whether I can go back to my babies in September and tell them the wonderful details I have learned, matters little. I can give them something they may keep when school days, and I, are shadowy memories.

From another point of view:— I have met socially and in the class rooms, a number of people who are about the accomplishment of a purpose. The time is too short and we are too many to become well acquainted, but some personalities have made themselves felt and I shall remember them gratefully in the future. There are many types. There are the serious, dignified ones. You feel that their work and their selves are closely united and you are inspired by them to get nearer to your own work. There are the veterans, the infants; the hard-workers, the butterflies; the retiring ones, the merry ones. All do their part towards making up the atmosphere of the School — an atmosphere that can be had only under such conditions. These influences shake you out of yourself and you become not one — but one of the crowd.

Most of us have been out of school for some years and have grown up in the profession. It is hard to get back to the pupil stage, but once there we see things as we shall never see them as teachers. Retaining our teachers' experience, and obtaining the pupil-spirit, little misunderstandings between ourselves and our children straighten themselves out. Why? Simply because we are no longer on the platform but in the more lowly seat at the desk, and in the mental attitude of the pupil.

Again, we have the chance of seeing other teachers teach, and it is natural to make comparison between yourself, your style, preparation of work, presentation of lesson, manner before the class — and these qualities in the lecturer before you. There are many, many things to admire and adopt and a few to avoid.

I can make no criticism. I do not know where improvement could be made. There are, no doubt, many imperfections, but thanks to the men at the head of affairs, these are not permitted to ruffle the surface of the waters, and things are kept smooth for the students.

Thanking you and the other Professors and Officers for your never-failing patience and courtesy and for the effort you have made to give us your best.

I am,

Very sincerely yours,

LILLIE J. MITCHELL.

TRAFALGAR DAY, OCTOBER 21ST.

The Navy League suggests, among other ways of observing Trafalgar Day, the display of Nelson's signal, "England expects that every man will do his duty." This should be the key-note of the lesson to be drawn from the day. Duty, not glory, has been first in the mind of every man who has served his country truly. "Thank God, I have done my duty" were the great sailor's last words.

"Wars may cease," says Captain Mahan, in his *Life of Nelson*, "but the need for heroism shall not depart from the earth, while man remains man, and evil exists to be redressed. Wherever danger has to be faced, or duty to be done, at cost of self, men will draw inspiration from the name and needs of Nelson."

The following books and poems are suggested for preparing lessons on Nelson. Southey's "Life of Nelson," Mahan's "Life of Nelson," "Nelson and His Captains," W. H. Fitchett, "Nelson" in *Heroes of the Nations*, and in *English Men of Action Series*.

Browning, "Home Thoughts from the Sea;" Scott, Introduction to the 1st Canto of *Marmion* — lines on Nelson; Tennyson, "Ode on the Death of the Duke of Wellington."

See also, Review for October, 1905.

FOR FRIDAY AFTERNOONS.

Motion Play—The Winds.

(To Teach Directions.)

1.

Up from the south came a gentle breeze,
 (point south)
 It rocked the bird's nest in the trees,
 (wave both arms)
 It said, "The summer is almost over,
 Fly away birds, it is late October." (wave arms)

2.

Oh, ho, oh, ho, hear the west winds blow,
 (point west)
 The daisy buds are nodding so, (nod heads)
 It said, "We'll shake the gay leaves down,
 (raise and lower arms)
 Leaves of red and yellow and brown."

3.

Up from the east came the wind again (point east)
 Down fell the gentle drops of rain (tap desks)
 It said, "We will water the thirsty flowers,
 For earth is refreshed by gentle showers."

4.

The north wind came with rollicking song,
 It shook the apple-tree, sturdy and strong,
 (shake with right hand)
 It said, "It is winter, ha! ha! ho! ho!
 Then down fell the feathery flakes of snow!
 (Raise and lower arms, gently shaking fingers).
Kindergarten-Primary Magazine.

An Apple Lesson.

(By a Girl).

When teacher called the apple class, they gathered round
 to see
 What question deep in apple lore their task that day might
 be
 "Now tell me," said the teacher to little Polly Brown,
 "Do apple seeds grow pointing up, or are they pointing
 down?"

Poor Polly didn't know, for she had never thought to look,
 (And that's the kind of question you can't find in a book.)

And of the whole big apple class not one small pupil knew
 If apple seeds point up or down! But, then, my dear, do
 you?
 —St. Nicholas.

God comes down in the rain,
 And the crops grow tall—
 This is the country faith,
 And the best of all.

—Norman Gale.

Farewell Summer.

(The Wild Aster.)

In the meadows near the mill,
 By the wayside, on the hill;
 In the fields that wander down
 To the edges of the town,
 And beside the farm house door,
 "Farewell summer" blooms once more.

Little asters blue and white,
 Many as the stars at night.
 Summer's flowers have blown away;
 Now you come to make us gay.
 When the fields are growing brown,
 And the leaves come fluttering down.

How I love to gather you,
 Purple flowers and white and blue,
 On the cloudy afternoons,
 When the wind makes pleasant tunes
 In the orchard grasses dry,
 Where the ripened apples lie.

Dear to me are days of spring,
 And the summer makes me sing;
 Winter has its times of cheer,
 But the best days of the year
 Come when, close beside our door,
 "Farewell summer" blooms once more.

—St. Nicholas.

Faded Leaves.

The hills are bright with maples yet;
 But down the level land
 The beech-leaves rustle in the wind
 As dry and brown as sand.

The clouds in bars of rusty red
 Along the hilltops glow,
 And in the still, sharp air the frost
 Is like a dream of snow.

The berries of the briar rose
 Have lost their rounded pride,
 The bitter-sweet chrysanthemums
 Are drooping heavy-eyed.

The pigeons' black and wavering lines
 Are swinging toward the sun;
 And all the wide and withered fields
 Proclaim the summer done.

His store of nuts and acorns now
 The squirrel hastes to gain,
 And sets his house in order for
 The winter's dreary reign.

'Tis time to light the evening fire,
 To read good books, to sing
 The low and lovely songs that breathe
 Of the eternal spring.
 —Alice Carey.

MISTAKES IN DISCIPLINE

1. It is a mistake to try to teach without good order. A prime condition of successful school work is the undivided attention of pupil and teacher to the work in hand. Secure good order before attempting any other work, and when secured, maintain it.

2. It is a mistake to suppose that "good order" means perfect quiet. The order of a successful school is the order of an earnest, active community, steadily, quietly and cheerfully engaged in the pursuit of legitimate business. This pursuit will necessarily be attended with some noise. The order of life, not death, is what is wanted. Order may be heaven's first law; but it is not heaven's only law. Order is not repression, but direction. The necessary noise of legitimate work is not disorder.

3. It is a mistake to call for order in general terms, and to hedge the conduct of children with numerous rules. Children usually know what is and what is not proper conduct. Leave them as free as possible to regulate their own conduct, and yourself as free as possible to deal with each offence specifically and to adopt punishment — when punishment is necessary — to the exigencies of each case as it shall arise. The child who in a moment of forgetfulness asks his neighbor for a pencil is much less a criminal than he who maliciously annoys all around him by talking; but each has equally been guilty of a technical violation of the law which says, "Thou shalt not whisper." No sensible teacher would administer the same punishment to each.

4. It is a mistake to be too demonstrative in maintaining order. Control as far as possible, without seeming to control. Do not be the most disorderly person in the school in your efforts to maintain order. Banging a bell or pounding a table may attract momentary attention, but will not secure quiet and work.

5. It is a mistake to speak in too high a key. As a rule, the more and the more loudly you speak, the less and the less distinctly the pupils will speak.

6. It is a sad, cruel mistake to compel children to sit quietly in one position for even half an hour. Try so sitting yourself, if you would find one good reason for not making such requirement. Insist upon graceful, healthful position, but not upon absolute stillness. The younger the pupil the more frequently should be permitted changes of position

7. It is a mistake to be satisfied with order that continues only while the teacher is present. He who preserves the peace only when under the immediate observation of the police is not usually considered a model citizen. Men and women who possess the power of self-control are the products the schools should return to the State. The less police duty a teacher does — and is compelled to do — the better for the future of the State.

8. It is a mistake to treat pupils as though they were anxious to violate the rules of the school. If you would make a villain of a man, treat him as though you thought him one. The law does not assume that any man is a criminal. But you must distinguish between blind confidence and a frank trust in those who have not proved unworthy.

9. It is a mistake to punish by pulling ears, striking upon the heads, etc., or to inflict corporal punishment in any form, except in extreme cases. In maintaining order, always appeal to the highest available motive. "Do right for right's sake" should be the rule of action; but secure order by some means. — Intelligence

THE FATHER OF ALL HOT SPRINGS.

The Sprudel is the most ancient of all Carlsbad's fountains, the father of all hot springs, and still pours forth in primeval vigor the greatest flood of all. It rises like a geyser in its basin, a steaming, spouting column an inch and a half thick and from six to thirteen feet high. Around it stands priestesses, the spring-girls, dressed in white waterproof uniforms. They fix the drinking-cups at the end of poles and catch the water as it comes fresh from the earth's heart. The geologists call Carlsbad's fountains virgin or volcanic water. They have their sources in no rainfall sinking to fill subterranean reservoirs. Created in those glowing inner laboratories of the mother earth, the water here leaps to light and air for the first time.

—*Harper's Magazine for August.*

NOT ON THE MAP.

Joan was a most conscientious pupil, eight years old. During one of the school study periods the teacher noticed her searching a large atlas intently with a most puzzled expression. After a few minutes she asked the child what she was looking for.

"Oh," said the anxious student, "Miss Kane said we were to find all the places spoken of in the history lesson on the map, and it says that 'Columbus was at the Point of Starvation,' and I can't find it anywhere!"

USEFUL BOOKS.

The Living Plant.

The new volume of the American Nature Series, "The Living Plant," by William F. Ganong, Ph.D., Professor of Botany in Smith College, will prove a welcome edition to our botanical literature. It is the first attempt in our literature to present to the reading public in a strong, clear, comprehensive way, the main phenomena of plant life.

The book is designed, as Professor Ganong points out in the preface, not for his "botanical colleagues," neither "as a digest of our present scientific knowledge of plant physiology for the use of experts in that subject," but "it seeks to present to all who have interest to learn, an accurate and vivid conception of the principal things in plant life."

The whole book seems designed for private reading, rather than for a class text. Even the paper and the binding suggest the library rather than the class-room. It is a book for the people by one of our most inspiring and popular teachers. Dr. Ganong needs no introduction to the teachers and general reading public of the Maritime Provinces. We predict for his book a large circulation. The layman will find it a charming substitute for romance, biography and history for many an evening reading; the student and lover of nature, most interesting accounts of the unfolding of nature's ways; and the teacher, rare models of clear, logical presentation of the main features of plant activity.

A list of the subjects treated in the eighteen chapters will help to give some idea of the attractive arrangement and scope of the work:

CHAPTER I.—The various ways in which plants appeal to the interests and minds of men.

II.—The prevalence of green color in plants, and the reason why it exists.

III.—The profound effect on the structure of plants produced by the need for exposure to light.

IV.—The kinds of work that are done by plants, and the source of their power to do it.

V.—The various substances made by plants and the uses thereof to them and to us.

VI.—The substance that is alive in plants and its many remarkable qualities.

VII.—The way plants draw into themselves the various materials they need.

VIII.—The ways in which substances are transported through plants, and finally removed therefrom.

IX.—The peculiar power possessed by plants to adjust their individual parts to their immediate surroundings.

X.—The various ways in which plants resist the hostile forces around them.

XI.—The ways in which plants perpetuate their kinds, and multiply themselves in number.

XII.—The many remarkable arrangements by which plants secure union of the sexes.

XIII.—The ways in which plants increase in size, and form their various parts.

XIV.—The orderly cycles pursued in growth, and the remarkable results of the disturbance thereof.

XV.—The many remarkable arrangements by which plants secure change of location.

XVI.—The methods of origin of new species and structures, and the causes of their fitness to the places they live in.

XVII.—The remarkable improvements made in plants by man, and the way he brings it about.

XVIII.—The physical groups into which plants naturally fall, whether by relationship or habit.

Throughout the book the author holds closely to Darwinian adaptation, and in a rather apologetic tone explains that he has "omitted a good many of the newest ideas" regarding plant life. He declares for vitalism as opposed to mechanism, "Not a supernatural vitalism of the theological type, and certainly not designed for theological needs, but a perfectly natural vitalism, based on the superior interpretive power of an hypothesis assuming the existence in Nature of an X-entity, additional to matter and energy, but of the same cosmic rank as they, and manifesting itself to our senses only through its power to keep a certain quantity of matter and energy in the continual orderly ferment we call life."

Since the author seems *so sure* of his vitalism we cannot help but wish that he had given some explanation regarding the superior interpretive power of the hypothesis mentioned above, and also some direction for finding the value of X in the X-entity.

The work is published by Henry Holt & Co., New York, 1913, and is an 8vo. volume, bound in green cloth with gold lettering, comprising xii + 478 pages, and attractively illustrated, with 178 figures, and several colored plates. Price \$3.50.

H. G. PERRY.

QUOTATIONS.

Train up thy mind to feel content:

What matters then how low thy store?

What we enjoy, and not possess

Makes rich or poor.

—W. H. Davies.

WHEN MIDDLE NAMES WERE BANNED.

People have not always been allowed the pleasure of having as many names as they wish; indeed, 400 years ago not even a middle name was allowed in England. It was illegal. The old English law was definite and admitted of no infraction of its ruling.

The only exception made to this iron-clad regulation was in the case of persons of royal rank. If they really wished it they could boast a middle name, but woe to the person of ordinary rank who was sufficiently unwise or obstinate to insist on having more than two appellations.

For the first offence he would very likely be tied to a whipping post and severely lashed. For a second offence he would endure some more lasting punishment, perhaps the removal of his thumbs or his ears. And if he still persisted in his stubbornness he would be hanged.

NELSON'S HAND AT TENERIFFE.

Nelson's left-handedness was an attainment of which he could be legitimately proud, as he was. J. G. Gren tells a story of the admiral's visit to Great Yarmouth to receive his freedom of the borough. "A storm met him on his landing, but the danger failed to prevent his appearance on the quay. When the freeman's oath was tendered to him the town clerk noticed that the hero placed his left hand on the book. Shocked at the legal impropriety, he said, 'Your right hand, my lord. 'That,' observed Nelson, 'is at Teneriffe'."

Some old soldiers in the French army had disobeyed orders, and were sentenced to be shot. On their way to the place of execution they passed by the general, and pointed to the scars on their faces and breasts. This action did far more than speech could have done. The general instantly stopped the execution and gave the men a free pardon.

The wireless operators within a thousand miles of Portsmouth, England, were astonished the other day when this striking message came to them out of the air:

They sleep in peace amid the eternal snows,
Their goal achieved, their duty nobly done,
And over those victor's crown is won,
The loud, shrill requiem of the tempest blows

The impressive lines, said to be the first verses ever sent by wireless telegraph, are from a tribute to Captain Scott and his companions, published not long ago in the *London Mail*. The British Admiralty, communicating with the battle-ship *New Zealand* off the west coast of Africa, sent them in order to test its wireless system.

—*Youth's Companion*.

CURRENT EVENTS.

The McMillan Arctic expedition which has set out to find Crocker Land has reached Etah, in North Greenland. He has with him twenty Eskimos, men, women and children, among them being two who were with Cook.

The newest battle cruiser, the *Queen Mary*, is said to be the fastest vessel afloat. On a recent trial trip she made a speed of forty-one miles an hour.

It is expected that Home Rule for Ireland, when it comes, will be followed by Home Rule for Scotland; the idea being that each of the four nations—England, Ireland, Scotland and Wales—should have its own legislature, with an Imperial Parliament to look after matters of common interest to all.

The whole length of the Panama Canal will be flooded this month, and vessels will be sent through it probably before the close of the year.

There is a suggestion that the United States of Columbia may soon proceed to construct another interoceanic canal by way of the Atrato River, and that English capitalists are ready to undertake its construction.

The International Congress on Alcoholism has met in Italy, and proposes to hold its next meeting in the United States in 1915. Three international institutions were organized at the recent meeting—a bureau for combating alcoholism, a federation for the protection of native races, and a federation of physicians opposed to prescribing alcoholic liquors in medical cases.

The first presidential election in the Chinese Republic was to take place this month; and recognition by foreign government will probably follow.

The approaching election in Mexico may not lead to a settlement of the difficulties in that country, as the northern rebels have already refused to abide by the result.

The second Balkan war has been soon followed by a third, though it is but a year since the outbreak of the first took all Europe by surprise. The Albanians have made a fierce attack upon Serbia, and after some success, have been driven back. It is not supposed that this ends the matter, for the Albanians in Servian territory will probably rise again at the first opportunity. Meanwhile a fourth war seems imminent, for the Turks demand that Greece shall cede back to them the islands taken during the last war, and Greece is preparing to defend them.

Paper made from seaweed, and said to be waterproof, fireproof and odorless, has been invented by an English chemist.

The wheat harvest of the great grain growing regions of the northern hemisphere is reported to be nearly two hundred and fifty million bushels more than that of last year. Among European countries which show a gain are Great Britain, Denmark, Prussia, Spain, Italy, Switzerland and Russia. Russia's crop area is ten times as great as Canada's; and there are in that vast country over five thousand agricultural societies with instructors supported by five public funds.

Winnipeg has now become the greatest wheat centre of North America, over a hundred and forty million bushels having been inspected there within the last twelve months.

A herd of five hundred buffaloes has been discovered in Alberta, showing that as a wild animal the buffalo is not yet quite extinct.

Dr. William Wakeham, of Gaspe, has been appointed as the Canadian member of the Permanent Mixed Fishery Commission. The United States representative is Dr. Hugh Smith; and the third member is Dr. Hoeck, appointed by the Queen of the Netherlands. The duty of the commission is to decide upon the reasonableness of any regulation made by Canada or the United States concerning fisheries in treaty waters under the agreement of last year.

An expedition under R. J. Flaherty, of Toronto, has been sent out by Sir William Mackenzie for the exploration of Labrador in search for valuable minerals. This is the third expedition under the same management, and great results are expected.

In the upper Mackenzie valley there is a country as large as Manitoba, every bit of it fit for settlement; or, at least, such is the report of a government official who has just returned from a trip to the far northland. At Fort Good Hope, within the Arctic circle, were the best gardens he saw on the whole route.

Appointed by Pope Pius X. to revise the Latin Bible, Abbot Gasquet and his assistants have been engaged in the preliminary work of gathering manuscripts for the last five years. For this purpose they have visited all the great libraries of Europe, and fourteen thousand biblical manuscripts have been brought to light, and photographic copies made. It will require many years to finish the work.

OCTOBER.

There is a beautiful spirit breathing now
 Its mellowed richness on the clustered trees
 And, from a beaker full of richest dyes,
 Pouring new glory on the autumn woods,
 And dipping in warm light the pillared clouds.

— *Longfellow.*

SCHOOL AND COLLEGE.

Rothsay College for Boys opened after the summer holidays, with about sixty pupils in residence. Two new wings have been added to the college and electric lighting has been installed.

Fredericton schools are full to overflowing. A new department for grades V and VI has been opened in the Assembly Hall of the High School.

Miss Sarah Hill, leading graduate of Hawkins Academy, Newcastle, was the winner of the fifty dollar scholarship donated by Sir Max Aitken. Miss Hill is now attending the Normal School at Fredericton.

Miss Frances L. Fish, M.A., vice-principal of the Campbellton, N. B., grammar school, spent her summer vacation in doing graduate work at the University of Chicago.

Mr. Edgar Wood, of Cumberland Co., N. S., who was a member of the class of 1834 at Mount Allison, visited Sackville this summer. Mr. Wood, who is an M. A. of Cornell University has been for seventeen years principal

of the Normal School at Hawaii. He is now enjoying a year's leave of absence, which is to be spent in travel.

Miss Elizabeth Maddon, of Chester, N. B., has gone to St. John's, Newfoundland, to teach Domestic Science.

Among our teachers who have gone West this autumn, are Miss Hazel McCain, of Florenceville, N. B., who has taken a school in Calgary, and Miss Mary McCulloch, of Hantsport, N. S., who has gone to Edmonton.

The School Board of Amherst, N. S., are encouraged to go on with the work of securing medical inspection in the schools. At a meeting of the Board on September 16, to which rate-payers were invited, evidence was given by teachers and medical men of the benefits resulting from past work of this kind, and a resolution was unanimously passed requesting the School Commissioners to make arrangements for medical inspection and for the engagement of a competent nurse. Amherst is to be congratulated upon the co-operation of the physicians with the educational authorities in this matter, and the foresight and energy with which it is being carried through.

Among the many Canadians who crossed the sea this summer none has been more signally honoured than Dr. John Stewart, of Halifax, who received from his Alma Mater, the University of Edinburgh, the honorary degree of L.L.D.—*Public Health Journal.*

A wedding which interests many readers of the REVIEW took place at Truro on September 10, when Miss Jean Patterson, granddaughter of Dr. J. B. Calkin, M.A., L.L.D. former Principal of the Provincial Normal School, was married to Mr. A. G. Pierce, of Richibucto, N. B.

Two Nova Scotia teachers, the Misses A. M. and E. M. Ogilvie, of Elderbank, will teach this year in the Academy at New Carlisle, Bonaventure Co., P. Q.

Stellarton is putting up a \$20,000 school building for the pupils of the lower grades. It is hoped that the new building will be ready for use at the beginning of the New Year.

Dr. H. L. Stewart, late lecturer on Philosophy in Queen's University, Belfast, has been appointed to fill the Chair of Philosophy at Dalhousie University, left vacant by Professor Laird. Professor Stewart is not able to come to Canada just yet, and for a short time his place will be filled by Mr. Rupert Lodge, nephew of the famous Sir Oliver Lodge, of Birmingham University.

Miss Ida B. Jamieson, of Truro, has returned to her post on the staff of the William Penn Charter School in Philadelphia.

Halifax Ladies' College re-opened with the largest enrolment in its history. The staff remains unchanged from last year.

Lunenburg people celebrated the successful years' work done by the teachers and students of the County Academy at a meeting in the Assembly Hall on September 18th, when fifty-five dollars in gold were distributed among the pupils who had made the highest marks in the Provincial examinations. The meeting was large and enthusiastic, and well deserved tributes were paid in the speeches to Principal McKittrick.

Acadia Collegiate Academy and Business College opened on September 3, with seventy-five resident students and sixty day pupils. Principal Archibald has now ten teachers on his staff.

New Brunswick School Calendar, 1913-14.

1913		May 23	Empire Day.
Oct. 20	Thanksgiving Day. (Public Holiday.)	May 24	Victoria Day. (Public Holiday.)
Dec. 16	Examinations for III Class License.	May 26	Examinations begin for Class III Teachers' License.
Dec. 19	Schools close for Christmas vacation.	May 30	Last day on which Inspectors are authorized to receive Applications for Departmental Examinations.
1914		June 3	King's Birthday. (Public Holiday.)
Jan. 5	Schools open after Christmas Vacation.	June 5	Normal School Closing
Apr. 9	Schools close for Easter Vacation.	June 9	Final Examinations for License begin.
Apr. 15	Schools re-open after Easter Vacation.	June 22	High School Entrance Examinations begin.
May 18	Loyalist Day. (Holiday for St. John City only.)		

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RECENT BOOKS.

The Earthly Paradise is a well-known treasure-house of lovely, old-world tales, Greek and Norse. From this store some of the most interesting to children have been selected and expressed in prose by Mr. W. J. Glover in *Tales from the Earthly Paradise*. The book is intended for supplementary reading in intermediate grades. The poet's words seem to have been retained as far as is consistent with prose, but Morris' style is so particularly clear and simple that it seems a pity not to present these charming stories to children in their original form. Each tale has very practical composition exercises appended. The book is published in three parts, price, sixpence each. (A. & C. Black, 4 Soho Square, London, W.)

Volume III of "The World Literature Readers" shows the remarkable scope of native primitive life upon this continent. It deals with *Mexico, Peru, the United States and Canada*. Among the writers from whom the selections on our own country are taken are Sir Gilbert Parker, Jean Blewett, C. G. D. Roberts, Stewart Edward White and Mrs. Humphrey Ward. These are attractive books, well illustrated and give a great deal of fresh material for history, geography and literature classes. (Cloth, 276 pages, price 45 cents. Ginn & Co., Boston.)

Teachers who have difficulty in finding suggestions for composition work, either oral or written, will do well to send for *A First Book of Composition*, by Briggs and McKinney. The book is intended for the first two years in the High School, but contains many exercises that might be used in lower grades. It is very practical, including a very large number of varied exercises. In the student's hands, it would be a valuable text-book, and we can also recommend it highly for the teachers' desk. (Cloth, 300 pages, price 90 cents. Ginn & Co., Boston.)

From Ginn & Co. we have also *Sight Reading in Latin*, by H. H. Bice, head of the Latin department of the

DeWitt Cluilton High School, New York. The material for reading is taken from Caesar's "Gallic War" and "Civil War," but these extracts are preceded by easier short selections from Livy and other Latin writers. A very good feature is the exercise preceding each of the early readings and giving lists of words, drill in inflections and hints how to work at the translation. These helps are gradually discontinued, but not before they have put the student into the way of attaching a new passage intelligently. Where the book is not used in class, it might well be studied by teachers of Latin. (Cloth, 160 pp. Price 50c.)

The *Preliminary French Course*, by H. J. Chaytor, M.A., and H. E. Truelove, B.A., seems to combine some of the old-fashioned ways of teaching French with "Reform" methods. The rules of grammar are clear and the examples good; there are plenty of passages for intensive study, and the exercises for drill are excellent. Where girls and boys are beginning French too late to enter upon the necessarily long course of the direct method, this seems an admirable book to use. (Cloth, 164 pages, price 1s. 6d. University Tutorial Press, London.)

QUOTATIONS.

What is this life if, full of care,
We have no time to stand and stare?
No time to see when woods we pass,
Where squirrels hide their nuts in grass.
No time to see, in broad daylight,
Streams full of stars, like skies at night:
From Leisure, by W. H. Davies

The Sun,
Closing his benediction,
Sinks, and the darkening air
Thrills with a sense of the triumphing night;
Night with her train of stars,
And her great gift of sleep. —W. E. Henley.

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S. KERR,
Principal.



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N. B. OFFICIAL NOTICES

Options in Latin and Greek for Grammar School Class

No options outside the four Latin authors prescribed for Grammar School Class will be allowed in future.

In Greek, an equivalent play of Sophocles may be substituted for the Alcestis of Euripides, otherwise the options must be confined to the Authors prescribed.

There are no options in French.

W. S. CARTER,

Chief Superintendent of Education.

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The Educational Review.

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THE EDUCATIONAL REVIEW,

St. John, N. B.

The teachers of the lower grades in St. John schools have petitioned the school trustees for an increase in their salaries, and everyone who knows the conditions will admit that the request is just and reasonable. Teachers have waited patiently for recognition of their need of increased incomes to meet the increasing demands upon them. Public opinion is coming to their aid, and we may hope that they will not have to wait much longer. Meanwhile it rests with them, more than ever, to

prove themselves worthy. Dean Briggs' advice to Wellesley College girls is always timely: "If you have to earn a living and begin at the bottom, make the bottom stronger because you are there. Then trust to time. So few workers in proportion to the whole number give themselves intelligently, loyally and unreservedly to their immediate duty, that if you thus give yourself, you cannot but succeed."

Sometimes I think that our happiness depends chiefly on our cheerful acceptance of routine, on our refusal to assume, as many do, that daily work and daily duty are a kind of slavery. How long it takes us to learn that "the word of God is not bound," that what enslaves us is not the routine of life, but the chafing at the routine! How long it takes us to see that every life without a light in it is dull, that no life with a light in it can be dull, and that whether the light is there or not is a matter of our own will!— *Dean Briggs.*

We understand that the meeting-place of the Summer School of Science for its twenty-eighth session in 1914 has not yet been fixed upon. The last two sessions, both largely attended and very successful, have been held in Nova Scotia. It is now the turn of some community in New Brunswick to enjoy the benefit of a meeting, and to offer the advantages of the school to its teachers at close hand.

We are glad to note that the teachers of Kings and Queens Counties, New Brunswick, have put on record a resolution to the effect that no teachers should engage to teach in their home district for a lower salary than they would accept if living away from home.

The "Highroad" books of the Royal School Series, suggested by Chief Superintendent Carter as useful for supplementary reading are advertised in this issue by E. G. Nelson & Co.

BOTANY.

L. A. DEWOLFE.

No family of plants claims our attention more strongly than the *leguminosae*. Other plants do not square their accounts with the soil until after they are dead. This family, however, owes no board bills. In fact, it not only pays its own way, but leaves an amount on the credit side to help the less fortunate plants that may follow after it.

Everyone, doubtless, knows how clovers and allied plants enrich the soil by allowing bacteria to live in small lumps on their roots. If any reader be not familiar with this fact, he should read in some botanical text-book about "nitrification" and "root-tubercles."

Since this is a family of benefactors, we cannot become too well acquainted with it. Different members show much variation, and include herbs, shrubs and trees. To learn the flower structure most commonly met, however, I suggest a study of the sweet pea. Notice the peculiar irregular corolla, with the one larger petal covering the others in the bud, and spreading back when in full bloom. Particularly, however, should we notice the stamens. There are ten; but the filaments of nine of them grow together, forming a sheath, and one is separate. This occurs in no other family.

There are peculiarities about the leaves in many species. In the peas and vetches, for example, some of the leaflets have become tendrils, and to make up for the loss in green surface, the stipules have become large and leaf-like.

School children should be familiar with the clovers of the farm. The red, white and alsike are everywhere. The crimson clover is becoming more common. Alfalfa, which is closely related to the clovers is, also, being grown experimentally. In the west, it is one of the most important fodder crops. The yellow or hop clover is a common weed. Similar to clover, too, is Melilot, or Sweet Clover.

The vetches, or wild peas, are common in hay-lands; and are often sown with oats. Two or three species can be found without trouble. I find the hairy vetch, called "moose-pea," in many localities. The Beach Pea will be familiar to those living on the sea-shore. The ground-nut or wild bean is common in our river valleys. It likes to climb among the branches of low willow shrubs. The Canadian tick-trefoil often grows with it.

It is, of course, needless to mention the peas and

beans of our gardens as belonging to this family. It also furnishes a few ornamental trees and shrubs, among which are the Locust (*Acacia*) Honey Locust, Siberian Pea Tree, Red Bud, *Genista* and *Wistaria*. The *Genista* is a common greenhouse plant, which will bloom in the house during the winter, and again out-doors in the summer. The *Wistaria* is an attractive climber; but is not perfectly adapted to our winters. It is, however, worth trying.

Children will be interested to know that licorice comes from the root of a plant belonging to this family.

The next family worthy of attention is the *Umbelleferae*. It can be identified almost at a glance by the compound umbels or umbrella-like clusters of flowers. Each individual flower is small. Apparently it has no calyx. The calyx really forms an extra coat to the ovary; and has, therefore, practically lost its identity. Each flower has five stamens. Notice where they are attached. Study carefully such a plant as the Caraway to learn the family characteristics.

In our vegetable gardens we can find four members of this family, viz.—carrot, parsnip, parsley, and celery. There are also a wild carrot and a wild parsnip, both of which are troublesome weeds. The former frequently grows in hayfields in August, after the hay crop is harvested. Its flower-cluster is somewhat the shape of a bird's nest. It is also called Queen Anne's Lace. Caraway, as everyone knows, also prefers a hayfield.

Along river banks the Cow Parsnip is abundant. Its leaves are as large as rhubarb leaves, and the flower cluster is nearly one foot in diameter. The plant grows five or six feet high.

In ponds two very common plants are the water parsnip and the water hemlock. The poison hemlock, which Socrates had to drink, was probably of this group.

In moist ravines in spring one finds the Sweet Cicely fairly common. I have found it in the same locality and blooming with Dutchman's Breeches, which is not of this family.

To make a complete collection of either of the foregoing families will take the student into all kinds of locations—wet and dry; sunshine and shade; cultivated and uncultivated ground. Incidentally he will learn much besides being able to identify the plants named here; for, of course, he will not close his eyes to plants of other families.

NATURE STUDY OF ANIMALS.

Suggestions for the last part of November and
the first part of December

H. G. PERRY.

As general work for the grades, the lower, the intermediate and the advanced, base your studies for this month on the dog, varying the work according to the grade, and making the exercises largely of the nature of a comparison with some other well known animal, e. g., the cat.

Since we are studying things, not books, it would be well to have at hand some good natured dog that would not object to being handled. This will add interest to the work, and give you a chance to show your pupils how to carry on nature study work.

We suggest the following exercise:—

Study the general shape, size and covering of the body of the dog, and compare with the cat. Which has the softer coat. Which the firmer body and why? Explain how its habits of life tend to produce a muscular body. In what position is the dog's body when running fast? What other motions or gaits has the dog? Watch him trotting along a path, does he always carry his body in a straight line with the path? Does he stealthily stalk his prey like the cat, or run it down in wolf-fashion? How does he capture and hold his prey?

Compare the limbs of these animals, also their feet and claws. The advanced grades should make out a similarity of skeletal structure of these parts. Compare the size of the claws. The cat's claws are retractile, which explains why her feet seem so soft at times. Can the dog retract his? Does the dog use his claws in catching and in helping to hold his prey? What is their use? Boys will be eager to tell about dogs digging out burrowing animals, thus suggesting an answer. Which animal has the firmer and heavier pads, and why?

Note the shape of the pupil of the eye in each animal. Can both see equally well in the dark? The dog uses his eyes very little in the chase, but his sense of smell is so keen that he readily follows the track of the fox or rabbit, made hours before. Does he also use this sense in recognizing his friends and in detecting strangers?

Notice the listening attitude of the dog, and the position and shape of his ears. Are they well

adapted for catching sound? Can man hear and smell as keenly as the dog?

Examine the teeth of the dog, and make out a formula for their arrangement, according to directions given in the October REVIEW. Is he as well provided with molars as the cow? Watch him gnawing a bone and notice the teeth he uses. The long canine teeth are called tusches in the dog. Find these teeth in other animals and note how they compare in length with those of the dog.

Consider the food of the dog. On what does he chiefly feed? Note that he has not yet learned to chew his food properly, but gnaws it off in small chunks and gulps it down. What do you infer regarding his powers of digestion?

How does the dog express emotions of attention, delight, affection, fear, shame and anger? Do you know of other animals that are equally demonstrative?

There are said to be as many as 200 different breeds of dogs, all derived from wolves or wolf-like animals. With the aid of your pupils make a list of the principal breeds. How many breeds are represented in your community? Pick out and discuss the more economic breeds, pointing out the chief value of each.

The dog is the great companion animal of man, and has been associated with him long before the dawn of history. One author has said that "the dog is the most companionable, and has the most human qualities and intelligence of all our domesticated animals."

These are but a few topics for the nature study of the dog; others of greater interest may be at hand, be free to use them, and all that you use make your own — fill with your own personality.

Encourage the collection of stories about dogs; have several read in the school. Direct the advanced grades to longer stories as "Beautiful Joe," "The Call of the Wild," etc., etc. Here also is a splendid opportunity for story-telling, composition work and essay writing.

The study of insects is not entirely passed with the passing of summer and early autumn. The Fall Cankerworm is common during November, and for many reasons deserves special attention at this time. This rather delicate silky-winged moth is at this season of the year found flying in the vicinity of our orchards, and at night is attracted to nearby lighted windows. These are the

males. Direct your pupils to search the orchards on mild nights with a lantern for the wingless females. They have a rather large body, and appear quite spider-like, as they are found crawling up the trees, and are about the same color as the bark of the tree. You will readily find them, for the males are always near.

Where are they going, and what is their object? Place several in a wide-mouthed bottle along with a small twig of apple tree, cover securely, and in a day or so you will find sheets of eggs attached to the twig. Search the ends of the twigs of apple tree for similar bunches of eggs. Read in Reports about the ravages of this orchard pest. This worm, together with its cousin, the Spring Cankerworm, works great damage in our orchards.

Our winter birds, especially the Chickadee, eat great quantities of the eggs and female moths. It is said that "the English Sparrow was imported largely to destroy these cankerworms, but they have greatly increased where the sparrow has become most numerous, and where our native birds have, in consequence, been driven away."

Plant galls furnish another line of very interesting nature work. Galls are abnormal growths of plant tissue caused by stimuli produced by some organism other than the plant itself. They assume various forms in the tissue of leaves, buds, and young stems. As the modification always takes place in rapidly growing parts, they are formed chiefly in spring and early summer.

Among our most common galls are those found on the leaves of the willow and elm. In the oak gall the entire leaf is modified. Stem galls are common in the golden rod and the wild rose, while a cone gall is found on some species of the willow.

Collect several of each of these galls, and as many others as you can find. The pupils should become familiar with the form and appearance of each. Dissect several carefully, so as not to injure the insect within. Is the insect active, in the larval stage, or in the resting, pupal stage? In either case note its size and shape. Questions at once arise as to how it reached its present location in the plant tissue, on what does it feed, what becomes of its excretions, etc., etc.

Bisect the cone gall of the willow longitudinally, and note its structure. Here the modification takes in a whole branch. Notice how the leaves have been dwarfed to form the scales, and the stem shortened. In the center of the cone, in the stem region, you will find the insect larva or pupa,

which has caused these changes. Look carefully among the scales of the cone for grasshopper eggs, and larvae or pupae of the saw-fly, the moth and the gall-midge, which are often found in such locations.

Keep galls for spring hatching. Those on the leaves of the willow should be kept moist and cool, in natural conditions as near as possible; while those from the golden rod and the rose may be kept in closed bottles in the schoolroom. You will be surprised at the number of insects that will come out of one rose gall.

The aquarium will also provide interest, especially for older pupils.

Collect sediment, leaves, small bits of twigs, sand and mud from the shaded side of a pond, in a glass fruit jar, and allow it to settle, standing the jar in the window. Examine the side farthest from the light for small green bodies attached to the glass and extending into the water for about an eighth of an inch, with the free end surrounded by a number of small arm-like parts. Tap the glass hard enough to set it vibrating and notice the sudden contraction of this little organism. It is now a small oval green mass, but watch it a few minutes, for it will soon extend itself out into its original form. This is a hydra, or fresh-water polyp, an animal belonging to the same great group as the sea-anemone, jelly-fish and coral. Examine one with a hand lens. Count the number of arms in several; is it fairly constant? Note the conical part around which they are arranged. This is the mouth, and it opens into a cylindrical cavity, from which branches extend into the arms.

Carefully turn the jar half around, so the hydra are next the window. On which side do you find them the next day? Why did they change their location, and how do they move from place to place? The teacher should read an account of the hydra in some good school-text.

Work may be extended to other topics, such as: the food of the hydra, how it captures its prey, the stomach and digestion, reproduction, etc., etc. A compound microscope will be of great advantage for working on these topics. For example, mount one in a drop of water on a glass slide, over it place a cover glass supported by small bits of a broken cover glass around the edge, and examine first under low power for movements of contraction and expansion; then under high power for cell structure, especially the nettle-cells in the

arms. These cells are among the most interesting structures in the animal world. The boy, who while in bathing has happened to strike a jelly-fish, has learned something of their power. You can cause the nettle-cells of the hydra to act in a similar way by drawing a drop of strong vinegar under the cover glass.

CENTENNIAL ANNIVERSARIES OF THE WAR OF 1912.

J. VROOM.

XVI.—The Burning of Newark.

December 10.—There came a marked change in the character of the war as the second winter drew near. No longer a series of petty raids and half-hearted invasions, it became a war of hatred and revenge. And for this change, perhaps, a certain brigadier-general of militia named McClure, who had been left in charge of the United States forces on the Niagara frontier, was chiefly to blame.

After the battle of the Thames, it was expected that Harrison would continue his advance, and attempt to occupy Burlington Heights. To defend this important position, Vincent had withdrawn his forces from the Niagara peninsula. McClure, therefore, was in full possession. According to his own account his men were ungovernable. With or without his consent they ravaged the country until they were driven back to Fort George by the return of the British troops.

But no unmanageable militiamen and volunteers were responsible for what followed. When McClure had decided to abandon Fort George and retreat to the opposite side of the river, he resolved to conclude the work of devastation by burning Newark.

The little town of Newark, the first capital of Upper Canada, was conveniently near to Fort George, and some of McClure's men had been quartered upon its inhabitants. Consequently it had suffered from their depredations less than the surrounding districts. But now the soldiers were ordered to set fire to the houses in which they had been unwillingly harboured; and no pity which they may have felt for their hosts could save the dwellings from the flames. On the night of the tenth of December, after a very brief warning to the inhabitants, the cruel order was carried out; and four hundred women and children were left to face the winter night without food or shelter,

while they watched the destruction of their homes.

The immediate result was a more rapid advance of Colonel Murray, who had been sent forward by General Vincent to drive out the invaders. General McClure fled with such haste that he left his tents standing, and some of his cannon and stores fell into the hands of the British. Three days after the burning of Newark, the British flag was again flying over Fort George, there to remain. The next thing to be considered was retaliation.

NOTES ON HIGH SCHOOL LITERATURE.

Some General Suggestions.

Teachers who have two or more High School grades under instruction find it very hard to give time enough to the set books for each year. Three-quarters of an hour should be the shortest period for a literature lesson, and an hour is much better. Where it is impossible to give this time to each class, try grouping your classes, and giving two, or even three, the same work. The books for grades IX and X might be taken in alternate years, or, as I am told one principal in New Brunswick is doing now, half the year may be given to the course for Grade IX, and the rest to Grade X work. As in the examinations the stress is laid on the books set for Grade XI, it might even be practicable to let all three grades do "As you Like It" together. An ungraded class can work together at a Shakespeare play with excellent results, because the work can be so varied. Where you are taking a class like this, divide the pupils into three or four groups, according to their ability in this subject. (The division will not altogether correspond with their division into grades.) For home or seat work set the same number of groups of questions or suggestions, e. g., if they are working at character study, questions might be graded thus: 1. How can you tell from the play that Celia was kind (or unselfish or practical)? 2. Tell all that you can find out about Celia from Act I, Sc. III. 3. Contrast Celia's character with Rosalind's. Then all three divisions could join in a discussion of Celia.

The advantages of grouping the classes and taking fewer books are:—

1. The longer time possible for each lesson.
2. The stimulus given by studying in a larger class.
3. The opportunity for the teacher to concentrate her own preparation.

Method of Presentation.

Always give your class a view of the book or poem as a whole before any detailed study is attempted. This is best done by reading it through to them, while they follow the reading in their books. I know that some teachers object to this plan and insist upon having each verse or paragraph studied and fully understood before they go on to the next. A teacher with a real gift for his subject can make any method successful; but in the hands of any but a genius, I believe that to put the detail before the whole is to lose the chance of securing interest. We do not look at a picture in that way. At our first glance we try to see in a general way what the painter wants to show us; afterwards, by careful scrutiny, we discover the details which make up the whole. And in approaching a piece of literature thus, we are following the writer's order. Before he begins to write, he must have his general conception. For a novel, a ballad, or a play, he knows the story he is going to tell; for a lyric, the mood or feeling he wants to express. So we must try to find out, first, what he wants to tell us, and then increase our understanding of it by studying his work in detail.

Selections from Cowper.

In teaching the selections from Cowper's Poems set for Grade IX in New Brunswick, the difficulty is that so few of them are of a nature to interest or please young people. "John Gilpin" is delightful to old and young alike, but it should be familiar to children long before they reach Grade IX. From the others choose those which show one of the author's most striking merits—his power of telling a simple story or incident, with clearness, grace and pathos or humour. "The Loss of the Royal George," "The Needless Alarm," ("in its humble way one of the most perfect of human compositions"), "Ode to Apollo," "The Epitaph on a Hare," "The Poplar Field" may be chosen to illustrate this power of his. In addition I should read to the class "The Colubriad"—the story is told in prose in the poet's letter to the Rev. William Unwin, August 3, 1732—and "The Retired Cat." These show also his interest in and close observation of animals. In what other poems is there evidence of this?

"Boadicea" and "The Loss of the Royal George" should be memorized, and with the for-

mer should be compared the beautiful lines in Tennyson's "Boadicea," beginning, "Fear not, isle of blowing woodland."

With "Alexander Selkirk" compare fully Tennyson's picture of the loneliness of the shipwrecked Enoch Arden, from "The mountains wooded to the peak" to "no sail." The comparison will bring out Cowper's distinctive simplicity.

"The Loss of the Royal George" is a masterpiece. Find out what makes it so. What are its merits? "Vigour of description," "force of pathos," the "simplest possible language." How many figurative expressions can you find in it? Compare what Cowper says in writing of another poet. "To make verse speak the language of prose without being prosaic, to marshal the words of it in such an order as they might naturally take in falling from the lips of an extemporary speaker, yet without meanness, harmoniously, elegantly, and without seeming to displace a syllable for the sake of the rhyme, is one of the most arduous tasks a poet can undertake."

Together with "To Mary," read the still more beautiful sonnet in the "Golden Treasury," "Mary! I want a lyre with other strings." Palgrave classes this sonnet in the very first rank.

"The Judgment of the Poets" would have special point if read on one of our cold May days, and if the pupils would collect references in the English poets to May and June.

The poems on the slave trade may be passed over lightly. "Pity for Poor Africans" shows how the poet can bring his humour to a serious subject, and it gives a perfectly accurate view of the chief obstacle to reform, the selfishness of the great merchants. But these poems are more nearly connected with history than with literature. Read the lines beginning "Slaves cannot breathe in England," in "The Time Piece," Book II of "The Task," and compare the part taken by the American poets, Longfellow and Whittier, in the fight against slavery.

The lines on "The Shortness of Human Life," so unlike Cowper in tone and in expression, are not original, but a translation from a Latin poem by a contemporary.

There remain "My Mother's Picture," and "The Castaway," which should be studied with some fulness. "The Castaway" should be learned by heart, so that the full beauty of the words may

be tasted. Readers of Charlotte Brontë will remember how Caroline Helstone recited it to Shirley, pacing up and down in the twilight, and the discussion between the two girls on Cowper's character. Explain from the Bible the reference "No voice divine the storm allayed," and compare "The billows swell, the winds are high." Olney Hymns No. 37.

Of the lines "On Receipt of My Mother's Picture," Cowper writes, "A poem which, one excepted, I had more pleasure in writing, than any that I ever wrote. That one was addressed to a lady whom I expect in a few minutes to come down to breakfast, who has supplied to me the place of my own mother—my own invaluable mother, these six and twenty years."

Some Typical Questions.

Is the tone of the poem as a whole, happy or sad? Is it gloomy? joyful? Try to find the exact word for it. In lines 15-20 what does he propose to do for his mother? for himself? Compare lines 112-121. Study carefully the two wonderful little descriptions, ll. 28-31 and 36-45. What do you think of the metaphor in lines 88-99? Of the wording of those lines? Express in a sentence the gist of each division of the poem as printed in the text book. What is the force of "O" in line 1. [It expresses longing], of "but" in line 2? [It softens the force of "roughly."]; What is the antecedent of "it" in line 10? Express in your own words "Thy constant flow of love—too often makes." What is the meaning of "humour" here? Of "numbers" line 71?

From what you know of Cowper's poems you find that he was inclined to be melancholy when he was thinking of—whom? or what? When did he write in a happy strain? Mr. Goldwin Smith says, "An ink glass, the killing of a snake in the garden, a cat shut up in a drawer, sufficed to elicit a little jet of poetical delight."

Have at hand a complete edition of Cowper's Poems, from which to illustrate and supplement your lessons. And if you really want to get, and give, a fair understanding of the man, and at the same time a familiarity with some of the very best English prose, have also his letters. They are to be had in a good little edition, with an introduction by E. V. Lucas, in the World's Classics, published by Henry Frowde, Oxford University Press, for one shilling, net.

I have been asked to recommend books with notes on Palgrave's "Golden Treasury." Here are two: "Notes to Palgrave's Golden Treasury," Macmillan & Co., 60 cents; "The Golden Treasury Edited for the Use of Schools," Ginn & Co., Boston, 59 cents.

BUSY WORK.

[A paper read by Miss Gertrude Coughlin at the Charlotte County Teachers' Institute at St. George, October 3rd.]

While discussing this Institute with a fellow teacher last August, I mentioned that there was to be a paper on "Busy Work." She exclaimed, "Well, I shall certainly go, because I have been trying to find out just what busy work is ever since I have commenced to teach." At the time I was rather surprised at the remark, but since collecting material for this paper, I, too, have wondered just what it was.

Some maintain that busy work is for pupils who have finished seat work, in other words, work provided to keep children out of mischief. Others call industrial work, as making borders, chains, paper folding and cutting, busy work.

These may be placed under that head, but to me nearly all primary seat work is busy work, any game used in teaching or reviewing is busy work, and under the same head comes correlation work.

Viewing the subject from this standpoint it is totally unnecessary to put forth an argument defending its position on the time table, because all see readily that it must have a place. In rural schools it is indispensable.

Then select the plans that you judge to be instructive. Always have on hand an unlimited supply of material. You will be surprised to see how readily the children will furnish you with fruits, leaves, seeds, strings, pasteboard, in fact, almost anything that will be required.

Work the busy work idea into all subjects. A teacher has but to glance over a suggestion for busy work in order to ascertain whether it can be utilized. The progressive teacher keeps up a constant search for new material, because she realizes that in order to keep up the child's interest, she must have variety. Care should be taken that the child is familiar with the plan before a change is made. In the beginning teach the pupils the proper method.

Reading.

Busy work in reading is given to children just beginning school. Perhaps the first work given would be word building from letters. The words will be built by pupil and teacher, before being built by the pupil himself.

I. Each child is given an envelope containing bits of cardboard, each bearing a printed letter. Next he is given a hen cut out of cardboard, or a dog, or a cat, or a fish, the form depending on the word which had just been taught, and which you will build. We select a fish. On each side print "f-i-s-h." The teacher using a large pattern traces a fish on the board. Pointing to "f," ask, "Who can find a card with this on it? Lay that letter near the fish on your slate. Now who can find 'i?' 's?' 'h?'" Placing each in turn near the last one put up. Do this at least three times. Have the word erased, and make believe their slate is a pond. Fill the pond with fish.

Each new word in Part 1 of the Primer will furnish busy work, and after helping with two or three words the class will readily build any word. The make believe games play a very important part in Grade I, so that the slate may be a trap to catch rats, a nest to hold eggs, a pen for pigs, a barn for cows.

II. After the class has learned to print the word furnish each child with a slip of paper on which the word is printed. In preparing these slips use two sheets of carbon paper, and three copies are thus made at once. The children will enjoy printing on the slips. Vary this by using different colored ink to print the word.

III. Provide each boy and girl with a sheet from an old picture book. These are good because many of the words are those that are used in the primer, but a sheet from a magazine or paper will answer the purpose. Children's Pages appear in all the up-to-date papers; always save these, they are very useful. Ask the child if he sees a word he knows, then tell him to draw a circle (I call them fences) around it, and to do this to every word he knows. At the end of the period collect the papers and correct. Put the name of the child who has found the most words, on the board. This is an incentive.

Each teacher has her own way of giving seat work. My plan is to teach a lesson, then give seat work on the lesson, or give work on a lesson to be recited. A primer class has recited a reading

lesson; as busy work ask the class to print each word they remember three times. After they have learned a number of words, ask them to make a list of the words they remember. I have had pupils who have been in school but three months, print a list of over fifty words. Again, from a number of words that have been printed on the board, print those you can name. Make stories with the words. Arrange the list alphabetically. For a change have the words formed with beans or peas, colored beads or berries from the mountain ash, and afterwards printed on the slates or on paper. Children are very fond of this work.

Busy Work in Writing.

In teaching writing, I divide the alphabet into seven groups. Write each group on a card for each pupil. Group 1, "c, o, a, e." Group 2, "i, u, w, v, x." Group 3, "n, m, r, s." Group 4, "t, d." Group 5, "l, b, h, k." Group 6, "j, y, g, q, z." Group 7, "h, f, y." Have these letters (a) pricked round with a pin; (b) traced with a lead pencil; (c) copied on a slate. Vary this by using cards of different colors, but be sure to give the same group until the letters can be formed with some kind of accuracy. Write each child's name on a card and give him this to copy from. Have it kept in his desk to be referred to at any time. Let him change cards with other pupils, and so learn to write names of all the class.

Busy Work in Drawing

Give colored cardboard squares, oblongs, triangles, to trace. Have them cut in different sizes. Teach children to place smaller ones inside a square or oblong, then have them formed with tooth-picks, pith cubes, or seeds, etc., and place forms inside. From these teach to draw a square with rulers, and draw figures inside of squares. Draw triangles or oblongs between lines and thus make borders.

Next have circles traced. Use these in making borders. Then try ovals. From ovals form chick, hen, duck. Change to apples, tomatoes, turnips, carrots, which have been cut from seed catalogues. When a child can readily trace an object, he will soon learn to draw it free hand. When he discovers that he can draw one object, he will try others. You will find that drawing will furnish an unlimited supply of busy work. For model drawing use the models made in paper folding.

Mechanical or Industrial Busy Work.

In an age when industrial education is so insisted upon, it is necessary to furnish this kind of busy work. In choosing the following I have tried to select work that would teach the child something.

1. Cutting and mounting pictures that can be used for stories. This will teach the boys and girls form, and will prepare them for paper-cutting. "The Ladies Home Journal" prints a page of pictures each month. The circus picture was good, and furnishes the theme for a most interesting story. A child may make a circus if he is supplied with a pencil, paper, scissors and a number of animal cookies. These paper animals will furnish a subject for work in oral composition. All children love animals and are anxious to learn how and where they live. In passing I might say that the page of the Journal entitled "Flossie Fisher's Funnies" may be mounted and used for picture stories in Grades 3 and 4.

The girls enjoy making the paper dolls, and will furnish dollie with many and varied styles of dresses. Here is a chance to teach harmony of colors in Grades 2 and 3.

Each child may make a picture book. An animal book will be much prized; a book of birds is a joy; little people of other lands with pictures showing dress, games, manner of living, furnish a book that will be of use in every grade until the child enters High School. An inexpensive book may be purchased for the mounting. The pictures are cut from magazines, farm catalogues, picture-books and post-cards. The girls are very fond of a flower book, and, by the way, this book can be used later in teaching copy drawing.

In all these books have the name of the picture printed underneath.

To make a border for the blackboard the pupils will trace and cut out from the pattern the figure desired. These are pasted on the board to form a border. Oak or maple leaves, fruits, all make pretty borders for the Autumn months; holly and candles for December, hearts for February, chickens for Easter, and butterflies for June. Do not put a border on the board in September and leave it there for two or three years. In a rural school all grades may help with this work. Grade 1 will trace, Grade 2 cut the pictures out, Grade 3 color them and Grade 4 will paste on the board. This will interest all the pupils, and the border will be much more appreciated.

Very pretty booklets for words mis-spelled may be made by the children. They are made to represent a butterfly, an apple, a maple leaf, etc., The covering may be ornamented by simple drawings by the older pupils; the younger ones will simply print the title and the name of the month. The leaves are made of any kind of paper that the child brings. At this time of year the pupils will bring in autumn leaves of all hues. Have these traced and colored. No two leaves are colored exactly alike, no pupils will color the same. Use these for borders or mount on appropriate cards.

Second Grade pupil will draw the birds, color them, and underneath draw in the nest, and print number of eggs laid.

Third year pupils are familiar with terms used in paper folding, then this will furnish work for them, because they will work from directions that have been printed on the board. The pupils of this grade in a rural school will make number cards for the primary classes.

(To Be Continued)

THE EMPTY CRAYON BOX.

A little thinking will enable a teacher to make some profitable use of the empty crayon box. By measurement the cubical contents may be computed and it may thus become a convenient measuring unit. Cutting off an end at the right length the dry quart, liquid quart and liter may be readily made. A sharp pen-knife and a few small brads are all that are needed in this. Ends and sides holding as they do by mortise and tenon, may be set to show various angles. Sides, ends, tops, bottoms can all be used in making models of various surface forms, rectangles, triangles, etc. The ingenious teacher will put some forms together for drawing models. Six-inch rulers, and decimeter rulers may be in the hands of each pupil by using materials from the crayon box. Even the physiology class may get an idea of the real capacity of the lungs, stomach, etc., by knowing the cubic inches represented by the crayon box.

The uses of the ordinary shade stick may be extended into the school-room. No teacher need be without a yard stick showing feet and inches. Also the meter with its divisions can readily be made from a shade stick. Nearly all arithmetics have the decimeter measure shown. A piece of paper cut the length of this measure and laid ten times on a shade stick gives the meter. It would be well if pupils could see these measuring units commonly in use and in comparison.—Western Teacher.

TEACHERS' INSTITUTES.

On Thursday, September 25, the Teacher's Institute for the county of Restigouche met at Campbellton, with thirty-eight members present, and the President, Mr. James B. Carr, in the chair. Addresses were made by the Chief Superintendent of Education, Inspector Mersereau, Mr. Fletcher Peacock, Director of Manual Training, and others. At the afternoon session a clear and forcible address on Manual Training was given by Director Peacock, and a Paper, "How to Teach Children to Solve Arithmetical Problems," by Miss K. McNair.

Mayor A. A. Andrew opened the evening meeting in the Assembly Hall in well chosen words. The address of welcome was given by Mr. A. E. G. MacKenzie, and a programme of speeches and music was carried out.

On Friday morning a paper, "Talks for Beginners," was read by Mr. L. D. Jones, and one on geography by Mr. George King. These were followed by discussions. At the Friday afternoon session Spelling was the subject under consideration. Miss Sarah Duffy read a paper on "Best Methods of Teaching Spelling in the Primary Grades," and "Spelling in Advanced Grades" was dealt with by Miss Jessie W. Currie, B.A.

A resolution was passed that the Restigouche County Institute should hereafter meet once in two years, alternating with the meetings of the Provincial Institute. Officers for the coming year were elected as follows: President Mr. L. D. Jones, Vice-President, Miss K. McNair; Sec.-Treas., Miss Jennie B. Carter; Additional Members of Executive, Miss Emma Harquail, Miss Annie MacInerney.

The visiting teachers had an opportunity to see the work done by the Campbellton Cadet Corps, who were drilled on the School ground under charge of Cadet Captain Gray.

On Thursday afternoon, by the kindness of the Board of Trustees, the members of the Institute were taken in motors to Morrissey Rock. The weather was glorious and the scenery, beautiful at all times, was exceptionally so because of the brilliant colour of the autumn foliage.

The Institute was voted a success. The tactful genial manner of Inspector Mersereau, and the kindly, encouraging, thoroughly practical talks of Chief Superintendent Carter gave a great stimulus to the work.

The twenty-ninth session of the Charlotte County Teacher's Institute opened at St. George on Thursday, October 10, at ten a. m., when the chair was taken by the President, Miss Emma L. Veazey, of St. Stephen. After the appointment of committees, the President read an interesting address. She spoke of the loss to New Brunswick

incurred by the increasing movement to the West, and urged the teachers to be more optimistic about their own province and to look for the best opportunities here. She spoke of the advantages of the Summer School of Science, and of the creditable showing made by Charlotte County teachers who attended the school. Chief Superintendent Carter, in his address, held out the hope that teachers' salaries would be increased, and advised the teachers to see that they deserved good salaries, and to set a fair value upon their services. Other points dwelt upon by Dr. Carter were:—The demand for vocational training, the advance already made in agricultural education and in physical training, the desirability of music in the schools, the importance of sanitary conditions in the school-room. He complimented Charlotte County upon the excellence of their school buildings.

Addresses were given by Inspector McLean and Mr. R. P. Steeves, after which Mr. W. McL. Barker, Principal of the St. George School, read an excellent paper on English Composition, insisting especially on the need for much practice in oral composition. This paper excited much interest and was discussed by Mr. Denham, Dr. Carter, Miss Eleanor Robinson, and others. Mr. W. T. Denham, Principal of the Milltown Schools, read a paper on Arithmetic in our Schools. Mr. Denham was very definite, taking up the course in Arithmetic point by point, and describing his method of dealing with each. He gave some general suggestions about the time to be given to the subject, advising not less than one hour every day, and that hour to be in the morning, when the mind was freshest. A good deal of discussion followed this paper, Mr. Barker and Mr. Higgins debating some of Mr. Denham's points. Dr. Carter thought that some of the arithmetic rules and exercises in the books might be dropped with advantage. Mr. Barker suggested dropping specific gravity.

In the afternoon Miss Annie L. Richardson, of St. Andrews, read an admirably useful paper on the Teaching of Geography in Grades VI, VII and VIII. As this paper will be published in whole or in part in a later issue of the REVIEW, we shall not comment further except to say that it won appreciation and approval from all who heard it.

At the public meeting in the evening Coutts' Hall was crowded. Mayor McGrattan, in a short and cordial speech, welcomed the members of the Institute, and said that if they had good schools at St. George, he believed it was due to the policy of the Trustees, who believed in engaging the best teachers, regardless of expense, and leaving them to act according to their own judgment. Senator Gilmor and Inspector McLean both spoke briefly, and Director Steeves put before the meeting the case for Agricultural Education. Mr. Peacock, Director of Manual Training, gave an able speech on Manual Training and Household Science, stating concisely the conclusions arrived at in the

Report of the Commissioners on Technical Training. Mr. R. E. Armstrong, of St. Andrews, and Mr. James Vroom, of St. Stephen, followed with short and interesting addresses. The St. George Cornet Band enlivened the meeting by carrying out an excellent programme. The good attendance on a very disagreeable night and the close attentions and enthusiasm of the audience, argued well for the interest in Education taken by the people of St. George.

Friday morning's session was opened by a delightful paper on "Ferns," by Mr. James Vroom. The speaker began by pleading for the study of ferns for the sake of the cultivation of the taste. He said that the recognition of beauty of form was almost entirely a matter of training, and that to learn to recognize that a fern was beautiful was an important step. He showed how this work might be correlated with drawing. After pointing out the distinctive characteristics of our native ferns and drawing attention to the fine specimens that illustrated his paper, Mr. Vroom expressed his regret that field botany — the learning to know and love the beauty of plants in their own surroundings — seemed to be out of date.

The Institute then divided into two sections. Principal McFarlane gave a lesson on Geometry to a class from the St. George High School; and Miss Gertrude Coughlin read a very practical paper on Busy Work to those interested in Primary teaching. Miss Coughlin was kind enough to allow us to print her paper, part of which will be found on another page.

Miss Eleanor Robinson, editor of the REVIEW, addressed the united Institute on training children to use books as a source of pleasure.

In the afternoon Director Steeves gave a very valuable address on the importance and benefits of the study of elementary agriculture.

Resolutions were passed expressing the regret of the members of the Institute at the deaths of the late Dr. John Brittain and Dr. G. U. Hay.

Much pleasure was expressed by the visitors at choice of St. George as a meeting-place. The great natural beauty of the town, the attractive school rooms, the excellent school library and the hospitality and interest of the townspeople all combined to make the Institute particularly pleasant. At the close of the meeting motor boats took the members on a delightful excursion up the Magaguadavic river to Lake Utopia.

The new officers elected are:— President, W. McL. Barker, St. George; Vice-president, Miss Mary Mitchell; Secretary-Treasurer, F. O. Sullivan; Additional members of executive, J. Kerr Higgins, Miss Elizabeth Wilson, Miss Annie L. Richardson.

On Thursday, October 16, the teachers of Kings and Queens Counties met in their thirtieth annual session, in the Consolidated School Building at

Hampton. Inspector A. J. Brooks presided and addressed the meeting at the opening session. He was followed by the Chief Superintendent of Education. After a vocal solo by Dr. Ryan, Principal C. T. Wetmore gave a paper on Physical Drill. On account of the rain the drill itself, which was to have been given on the school grounds, had to be omitted.

In the afternoon the Institute divided into four sections:— Primary, Intermediate, Advanced, Trustees and Ratepayers. The lesson in the Primary Section were on Writing, Miss Bessie Howard; Drawing, Miss Ruth Thurber; Sounds of Letters, Miss Jennie Dunn. There was also a paper on Primary Handwork by Miss May Saunders.

The Intermediate work was begun by Miss Kate A. Corbett, who read a short but suggestive paper on Home Geography. A paper on Elementary History, by Miss E. Louise Harris, gave as the aims to be kept in mind: 1. To interest the children in history. 2. To lay the foundation for future work. 3. To inculcate patriotism. Both of these papers were discussed. Several speakers agreed upon the importance of giving the children, after each oral lesson in history, a few simple facts and dates to fix the story in their minds, and that these facts should be frequently reviewed.

Mr. George Perry next gave a lesson to a class of teachers on the Construction of Clauses and Phrases.

Meanwhile Mr. N. S. Fraser was giving a chemistry lesson in the advanced section, and this was followed by a paper by Mr. Logan on the Application of Chemistry in Experimental Nature Work, and a lesson on Recurring Decimals, by Mr. John A. Draper.

Among other subjects of interest to the Trustees and Ratepayers, this section discussed the use of school buildings as social centres, teachers' salaries from the ratepayer's standpoint, and the practice of having one session only on stormy days. Speaking on the last point, the Chief Superintendent stated that there is no provision in the school law giving authority to principals or teachers to hold one session only, except in the city of St. John, and that the practice has been so much abused throughout the province that St. John is to be asked to relinquish the privilege. The law requires five hours of work for every teaching day, and teachers cannot fairly record one session, i. e., from nine o'clock to one, as a full day's work.

The public meeting on Thursday evening was largely attended, and presided over by Mr. J. M. Smith. The address of welcome was given by the Rev. A. H. Crowfoot, Rector of Hampton. Dr. Carter, in his address, spoke particularly of agricultural education and its great importance to the country. He showed how in the United States, it was the business men of many sections who, recognizing that the prosperity of the farmer underlay the prosperity of the whole community, had be-

stirred themselves in devising and financing methods of instruction on this subject. He congratulated Kings County on the lead it had taken in school gardens, nine out of twenty-one school gardens in the province being in this county. Mr. Fletcher Peacock, Director of Manual Training and Household Science, spoke convincingly of the importance of the subjects which he directs. He stated that the Commission on Technical Education had recommended the immediate outlay of a very large sum of money on instruction in Handwork in the Primary Grades, and a much larger sum in Technical Education in High and Continuation Schools. Mr. R. P. Steeves in a short speech urged the public to recognize the importance and commercial value of agricultural education. Mr. A. J. Brooks made his first speech as Inspector before the people of the district and was enthusiastically received. The programme was varied by some excellent music furnished by Miss Lloyd, Mr. Ralph March, Mr. Cecil March, Dr. Ryan and others.

On Friday morning, Director Steeves spoke to the teachers on The Kind of Training Needed for Agricultural Teaching. Mr. Steeves' speech was marked by its appeal to sound principles and their practical application. Some of his points were:—The child learns more in the first six years of life than at any other period. How? By contact with people and with things, by asking questions, by watching and imitating. This method of learning sets up certain habits. When the child comes to school, by following along these lines, the school can be made an aid to the home. Nature study should be begun with what the child has already learned at home. A great deal can be done without a school garden to interest the parents and to make the child feel that home and school are working together. Country teachers have the best opportunities. Mr. Steeves had the Bulletin on School Gardens distributed to the teachers, and informed them that another, on Experimental Plots, would appear later in the year.

Miss Jean Peacock gave a most interesting lesson to five little girls on making aprons. The lesson began with questions on the uses of aprons. From this was drawn from the children the points to be considered in choosing material. Packets or samples of different kinds of material were supplied and the children chose one kind for a sewing apron and told why they chose it and discarded the others. A cut-out apron was then given to each child and while they sewed Miss Peacock shewed how she taught new stitches, and explained that she had chosen this lesson to shew what could be done in schools where there was no equipment for domestic science.

On Friday afternoon Miss Jessie Weyman read an admirable paper on English Literature, which we hope to present before long to readers of the REVIEW. The paper was discussed by Miss

Eleanor Robinson, Mr. C. T. Wetmore and others. A short, sensible paper on English Composition was read by Miss Mabel L. Marven and after a brief discussion of this, the session closed.

There were some very pleasant interludes in the programme of work during the meeting. On Thursday afternoon the members from the various sections met in the Assembly Hall for music and conversation, and refreshments were served by the Domestic Science Department of the Consolidated School. At the close of the session on Friday morning, Director Steeves was called to the platform and Principal C. T. Wetmore in a few fitting words, expressed the regret of the members of the Institute in losing Mr. Steeves as their Inspector. Their appreciation of his work among them and their good wishes for his success in his new position. He then presented Mr. Steeves with a handsome travelling bag, the gift of the teachers of his former inspectorate. Mr. Steeves, in a very cordial speech, thanked the teachers for their kind remembrance of him.

The following officers were elected for next year: President, Mr. N. S. Fraser, B.A.; Vice-President, Mr. John A. Draper; Sec.-Treas., Mr. W. N. Biggar. Members of the Executive, Miss Cora Bennett, Miss Mabel Marven.

ELEMENTARY AGRICULTURAL EDUCATION.

Mr. R. P. Steeves, Director of Elementary Agricultural Education for New Brunswick, has asked us to insert the following notice:—

Teachers who have taken the Agricultural course in whole or in part, and who would like schools next term in which this special work may be taken up, would do well to send in their names at once to the Director at Sussex.

The Director adds, that he already knows of several good openings for efficient teachers of this subject.

From inquiries we have heard, we gather that there is some haziness among our New Brunswick teachers as to the extra remuneration for teaching Agriculture. Teachers who have qualified, either at the Rural Science School at Truro, or at the Summer School of Science, if they carry out the work, **including a school garden**, receive \$30.00 a year. In addition to this, those New Brunswick teachers who studied at Truro last summer will receive in December a bonus of \$15.00.

The authorities hope to be able to increase these allowances before long.

In Ontario, the grant to teachers of Agriculture is \$75.00 and where a school garden is carried on, an additional \$2500. Trustees are allowed up to

\$100.00 as a grant for meeting the expenses of the work, and for the school farm or garden an additional \$25.00. Regulations require that instruction in the class room be given for two hours each week, and that the practical work carried on at home by the pupil be supervised by the teacher.

The Intermediate Certificate in Agriculture in Ontario is gained by work at two summer sessions at the Agricultural College at Guelph. Science specialists may take the last two years of their University course in Science at the Agricultural College, graduating with the degree of B. Sc. (Agr.); this preparatory to teaching Agriculture in the High Schools.

It is with pleasure that the REVIEW records the appointment of Mr. L. A. DeWolfe, M. Sc., of the Normal College, Truro, to be the Director of Rural Science Schools for Nova Scotia. For a month in the autumn and three months in the spring the director will visit schools taught by Rural Science teachers, and during the summer term he will teach in the Rural Science Training School at Truro. For the rest of the year he will teach in the Normal College, of whose faculty he continues to be a member, and keep in touch by correspondence with the Rural Science Schools.

It is a matter for congratulation that we should have in our own provinces men who have been for years in the closest connection with the schools, and who are eminently capable of directing this new and important educational work. Full of enthusiasm for their subject; well known and popular among the teachers, thoroughly familiar with the country and its conditions, and of proved efficiency in their former posts, both Director DeWolfe and Director Steeves are plainly the right men for their positions.

Director Steeves recommends the following books to teachers of agriculture:—

Beginnings in Agriculture, A. R. Mann, 75c.;
One Hundred Lessons in Agriculture, A. W. Nolan, 65c.;
First Book in Rural Science, J. J. Green, 40c.

These can be had of J & A. McMillan, St. John.

What's the way to school, you say?
A boy's way, do you mean?
It's out of the yard and far away
Where the grass is fresh and green.
It's up a tree and out on a limb,
And down with a leap and cry,
And that's the way to school for him,
When I see him passing by.

A CHRISTMAS EVE IN THE FOREST.

A Christmas Play for Children.

JEAN T. LEAVITT.

CHARACTERS.

HANS, A Woodcutter.	SUNBEAMS.
BABY FIR.	FIR TREES.
CHRISTMAS FAIRY.	BIRCH TREES.
THE WIND.	

SCENE I.

[*Trees standing about, the wind quickly and lightly passing back and forth. They wave and swirl their branches (arms) as he passes.*]

Baby Fir, (sorrowfully).—All I can do is to grow, grow, grow.

Wind, (moving faster).—All I can do is to blow, blow, blow.

Baby Fir.—But, Wind, you can travel wherever you like, While I have to stay here all day and all night.

Wind.—I shouldn't like that, I can never be still, But I do as I'm told, and not my own will.

(*Wind runs out and trees are still.*)

Birch Trees.—O little Fir tree, do not be so sad. The sweet air blows on you, and the sun shines on you, and some day you will be a big tree.

Other Trees.—We do not complain.

Sunbeams, (dancing in).—Enjoy what you have, O Fir!
For it may not last, O Fir,
You have youth, health and beauty,
So now do your duty.
Be a good, sweet, contented little Fir.

(*Sunbeams circle round and dance in and out among the trees.*)

SCENE II.

(*Trees standing as before. Christmas Fairy comes in softly and hears the Baby Fir lamenting.*)

Baby Fir.—My brothers are so tall and strong, the woodcutter will see
That any one of them will make a splendid Christmas Tree.
They'll be so proud and happy when he carries them away
To make the children joyful on Merry Christmas Day.
But I'm so small, so very small, no one will mark or know
How thick and green my needles are, how true my branches grow,
Few toys or candles could I hold, but heart and will are free,
And in my heart of hearts I know I *am* a Christmas Tree.

Fairy (laughing softly.)

I'll search and find St. Nicholas, the dear old Christmas Saint,
And in his fatherly, kind ear rehearse the fir-tree's plaint.
(*She hurries out.*)

(Hans comes in and looks about at the trees.)

A baby girl I have at home, and I've come forth to find
A little tree as small as she, just suited to my mind.

(He sees the little fir.)

Oh, here's a tiny baby fir — the very thing for me!
I'll carry it away to be my baby's Christmas Tree.

(He goes out.)

Birch Trees.—Oh, glad and proud the Baby Fir amid his
brethren tall,
To be the one thus singled out, the first
among them all.

Baby Fir, (smiling).—I'll stretch my fragrant branches, my
little heart beats fast,
I am a real, live, Christmas Tree,
I have my wish at last.

SCENE III.

(Trees standing as before, but Fir Trees looking disappointed. Hans and the Christmas Fairy come in.)

All the Trees address the Baby Fir.—

One red and shining apple, one orange bright as gold,
Six tapers and a tiny doll are all that you can hold.
But baby will laugh and baby will crow to see the
tapers bright.

Baby Fir.—Forest baby will feel the joy and share in the
delight.

(Hans carries off his tree.)

Fairy.—And when the tapers all are out, and baby gone to
sleep,

The little fir, in the silent night, a patient watch
will keep.

Though scorched and brown his needles, his heart
is filled with glee,

"I have not lived in vain," he'll cry, "I've been
a Christmas Tree."

[SUGGESTIONS.—If costumes are desired, they can be made of tissue paper, green for the fir-trees, crinkled white for the birches, yellow for the sunbeams. The Wind should have a loose robe with angel sleeves, or a cloak hanging loose from the shoulders, made of some thin grey stuff that will stream out behind him as he runs. A band round his head, with a gray goose wing at each side. Hans should have some bright colour about him,—a red blanket coat, or a red jersey, or a blouse with a red belt and a red cap, would do. The Fairy may wear any thin white dress, with gauze wings, a wreath of holly or red berries, and carry a wand with a gilt star. Diamond dust scattered over the dress would make it prettier.

But the dressing up part can be made as simple, or as elaborate, as is convenient, and a little ingenuity will suggest easy and inexpensive ways of indicating the character represented. All the children could wear their ordinary dresses and caps to suggest the character, *e. g.* the fir trees could have caps of green paper with fir twigs sewn on; the birches, caps made of birch bark; the wind, a cap with wings, and so on.

"I enjoy the coming of the REVIEW very much and I feel I can't do without it."—Subscriber.

GETTING READY FOR CHRISTMAS.

Custom almost demands that teachers give their pupils a "good time" on the Friday preceding the Christmas holidays.

To provide a new programme of entertainment from year to year, especially for teachers of advanced pupils, is rather difficult. Where the pupils remain under the same teacher, variety is necessary.

Doubtless the REVIEW will be pleased to assist us in our plans for this year's undertakings. This may be done by offering suggestions and publishing in the December issue the contributions of others.

I shall intimate a few of the methods I have found helpful, and in return shall be pleased for those who have used other forms of entertainment to pass them along.

When I have had the material and time to spare, the pupils have prepared a programme of suitable songs, readings, recitations and dialogues and have given a public entertainment. All teachers will agree that this becomes too exacting after awhile. Then we have spent our afternoons privately, playing games, before having our "treat" of candy, nuts, etc.

The games consisted of peanut hunts, carrying peanuts on a knife blade, bird puzzles, flower puzzles, cent puzzles and writing out answers to questions, the answers of which were geographical names. Prizes were awarded and the afternoon was pleasantly spent.

G. H. C.

WEYMOUTH, F. S., October 25, 1913

We gladly publish our correspondent's suggestions, and thank him for their timely arrival. We hope that other readers will follow his example in sharing their ideas for Christmas entertainments. Send them to us, if possible, before the twenty-fifth of November.

"No," complained the Scotch professor to his students; "ye dinna use your faculties of observation. Ye dinna use them. For instance—"

Picking up a jar of chemicals of vile odor he stuck one finger into it and then into his mouth.

"Taste it, gentlemen!" he commanded, as he passed the vessel from student to student.

After each one had licked his finger, and had felt rebellion through his whole soul, the old professor exclaimed triumphantly:

"I told ye so. Ye dinna use your faculties. For if ye had observed ye would ha' seen that the finger I stuck into the jar was nae the finger I stuck into my mouth."

POETRY IN THE PRIMARY GRADES

Winter Nights.

R. L. STEVENSON.

Whenever the moon and stars are set,
Whenever the wind is high,
All night long in the dark and wet,
A man goes riding by.
Late in the night when the fires are out,
Why does he gallop and gallop about?

Whenever the trees are crying aloud,
And ships are tossed at sea,
By, on the highway, low and loud,
By at the gallop goes he.
By at the gallop he goes, and then
By he comes back at the gallop again.

[Read the poem to the children in as spirited a way as possible. Try to make them hear the galloping of the imaginary horse. Tell them something about the writer.]

The man who wrote these verses was a very famous writer. He wrote many books for grown-up people; but he was very fond of children, especially of boys, and he has written some splendid stories for boys, and a whole little book of verses for children. He remembered about the time when he was little better than most older persons do, and he has told us a great deal about it. He lived in Edinburgh, a beautiful old town not far from the sea, and a very windy place. He was a very delicate little boy, and in cold weather had to stay in the house a great deal. Many a night he was too ill to sleep, and as he lay awake, he noticed everything in his room—the fire, the lights, the shadows, and all the sounds out of doors, and he had fancies about them, as sick children will. Let us read the poem again, and see what you can tell me about it. What kind of night was it? What time of night? Why wasn't the boy asleep? Do you ever lie awake at night? If so, do you listen to all the sounds outside? What do you hear? What did this boy hear? Was there really a man riding back and forth all night long? What made the boy think so? Why didn't he hear the man riding earlier, before the fires were out? Could he see out into the dark through his window?

What does he mean by the trees "crying aloud?" What noises have you heard trees make in the wind? Do you ever hear the wind on the telegraph wires? What kind of noise does it make? Why do you think the boy thought about ships tossed at sea? What tosses the ships?

I think that the writer wanted us to fancy that we heard the sound of the galloping horse. Shut your eyes and play that you hear a horse galloping. Then say the word to yourself "gallop, gallop, gallop." Does it sound like the noise the horse makes? Can you think of any other word that when you say it, sounds like the sound it tells about? [tinkle, crash, trickle.] Are there any long or hard words in these verses? Can you think why not? Who is speaking? Would he be likely to use long hard words? Tell in your own words what the boy heard. What line in these verses has the prettiest sound?

HOW TO WRITE LEGIBLY.

Now that the typewriter is in such general use in newspaper offices, it is seldom that the linotype operator gets such copy as used to be prevalent some years ago. But still there are a number of us that could profit well by a few rules that would tend to ward making our writing legible:

1. Keep the letters separate, as half the trouble in poor writing is caused by jamming the letters together.

2. The most difficult letters to form are "i," "e," "m," "n," "u," and "w." Make these perfectly. Let there be a distinct difference between "u" and "n." Try writing "minimum."

3. Almost as difficult are "b," "v," "o," "w," Make the bottoms of your "v's" and "w's" sharp cornered and not rounded.

4. Never loop the tail of the "q," but always do so with "g" and "y."

5. Do not make your "d's" like "ct."

6. Make your "a's" and "o's" radically different.

7. In writing "r" always form it in the same style.

8. Join the hinder part of the "h," "y" and "p" to the stem.

9. Keep your "a's," "d's," "g's" and "q's" "fat."

10. Always loop your "l's" and never loop your "t's."

11. In dotting the "i" and "j" place the dot directly over the letter.—Van V. Boyce, in *The American Printer*.

WORD STUDY — FUNNY, QUEER.

CONVERSATION.—What do you mean when you say you have been having fun? What do you say about things that give you fun?

A thing is funny if it is laughable, or comical.

A thing that is unusual is queer, or strange, or odd.

Many persons say "funny" when they should use one of these other words to tell what they mean. Think what "fun" means.

To see a kitten chasing its own tail is "funny." It would seem "strange" or "queer" if a kitten liked to go into the water.

DRILL EXERCISE.—Decide which of the words you have just studied should be used in each of these sentences:

1. You must have thought it—— that you were not invited to the party.

2. It was —— to see the pigs scamper for the trough when John brought their food.
3. See this —— insect.
4. It is —— that she forgot her telephone number.
5. The clown did many —— tricks.
6. It was a —— day, with clouds, snow, rain, and sunshine.
7. The ball game between the fat men and the lean men was a —— sight.
8. The orchard was a —— sight when the blossoms were covered with snow.
9. It was —— that he should lose his way so near home.
10. Does your newspaper have a —— page?

WRITTEN EXERCISES—Write a funny story about some little child or some pet animal. Or perhaps you can tell of some funny thing you saw at the circus.—School News.

CURRENT EVENTS.

The Dominion Government has awarded a contract for the mirror of a new telescope to cost over ninety thousand dollars. The mirror is to be six feet in diameter, and the telescope when completed will be the largest reflecting telescope in the world.

If experiments now being started in the Rocky Mountains prove successful, the whole Canadian Pacific Railway system may soon be adapted to the use of electricity as the motive power. It is said that there are water power sites available for developing the power over the entire system; and the point to be determined is whether the electric locomotive can be used on the heavy grades in the mountain sections.

Sir Ernest Shackleton has announced his intention of starting on another Antarctic expedition next year.

By a study of the tides, a geographer in the United States has come to the conclusion that a large body of land exists in the Arctic Ocean, somewhere to the north or northwest of the mouth of the Mackenzie River. This is possibly the Crocker Land supposed to have been approached though not actually seen by Arctic explorers; and it is the land which the Stefanson expedition is now seeking by sailing northward, and which the MacMillan expedition hopes to reach from the southeast. The latest reports from both expeditions tell of unfavourable ice conditions, but nothing that will seriously interfere with their work.

A Russian expedition which had been sent to explore the northern coast of Siberia from Bering Strait westward, and which when west of the mouth of the Lena had turned north to avoid the ice along the coast, found land which the discoverers have named Nicholas II Land, and followed its coast for about two hundred miles. The new land begins sixty miles north of Cape Chelyuskin, the northern point of the mainland of Siberia; and cannot be part of the extensive continent or archipelago supposed to lie north of Alaska. The two vessels engaged in the

survey were attempting to make their way to the mouth of the Yenisei, and complete the northeast passage to Europe. They will probably renew the attempt next year.

A monument to General Braddock, the famous British general who fell in the battle of Monongahela, in 1755, has just been erected at the scene of his last fight, near Uniontown, Pa.

An Italian inventor, named Ulivi, has given the world a new weapon of destruction, in the form of an instrument which throws out invisible rays capable of exploding a mine at a distance of a thousand yards or more. The rays are known as F-rays. The British naval authorities have been experimenting with these or some similar rays that can be used to explode submarine mines.

Canada's trade is in a more prosperous condition than ever before, the total exports for the last six months showing a large increase over those of last year. This increase was chiefly in the export of agricultural products, but the exports of minerals and of manufactured goods. It is expected that the export of agricultural produce will be further increased by the reduction of the United States tariff which has recently come into operation.

Denmark will accord home rule to Iceland; and it is expected that a new constitution will be adopted at the next general election in Iceland which will give the right of suffrage to everyone over twenty-one years of age, including women.

The largest water power in Iceland has been purchased by an English company, and will be used for the manufacture of fertilizers from atmospheric nitrogen. The waterfall to be used for this purpose is situated thirty-five miles from the coast, and a railway will be included in the work of development.

The Premier has turned the first sod for the construction of the new dry dock at Levis, Que., which is to be the largest in the world. The work is to be completed in three years.

Great Britain has accepted an invitation to send representative ships from the British Navy to join with the ships of other nations in the international fleet to pass through the Panama Canal at its formal opening in 1915.

The hundredth anniversary of the battle of Leipsic, which the Germans call the Battle of the Nations, was celebrated on the eighteenth of October by the dedication of an immense monument, nearly three hundred feet high, the largest and highest in Europe. It commemorates the great victory of the allies which freed Germany from the power of Napoleon.

Yuan Shi Kai has been formally inducted into office as the first duly elected President of the Chinese Republic.

The new Turco-Bulgarian frontier has been settled by treaty, and Turkey keeps Adrianople. It is a strong frontier city; but it means more than that to them, for it is their ancient capital and the burial places of their Sultans, and possesses many hallowed shrines.

The constitution of Mexico requires that one-third of the voters shall cast their ballots to make an election legal. It seems probable that this requirement has not been met in the recent election, and that Heurta will therefore remain in office as provisional president. As his government has not been and will not be recognized by the United States, and as the rebels in different parts of the country, but especially in the north, are still active and perhaps increasing their strength,

there is no hope of restoring order while he remains in power. It is believed that Britain, France and Germany are ready to support the United States in armed intervention.

Japan expects great benefit from the opening of the Panama Canal. Japanese goods that are now carried across the continent of America from Pacific ports can then be shipped direct to New York, and the raw cotton which Japan imports can be carried more cheaply. But yet more important will be the shorter route to Brazil which will be opened up by the canal; for Japanese immigrants are welcomed in Brazil, and will probably go there in increasingly large numbers in the future.

Under a new agreement which has just been concluded, China will recognize the autonomy of Mongolia, and Russia will acknowledge it as under Chinese suzerainty.

A new line of freight steamers between Canada and the West Indies has been established, the first steamer to sail during this month from Halifax.

SCHOOL AND COLLEGE.

Dr. Carter, Chief Superintendent of Education for New Brunswick, and Dr. Bridges, Superintendent of Schools in St. John, met the Executive of the Nova Scotia Education Association in Halifax on the 22nd of October, and provisionally arranged for an interprovincial educational convention, to meet on the 30th of June and the 2nd and 3rd of July next, in Halifax, under the presidency of the Chief Superintendents of Education for Prince Edward Island, New Brunswick and Nova Scotia.

Dr. Carter and Dr. Bridges while in Halifax visited the Halifax Academy, the Technical College and the Schools for the Deaf and Blind.

We notice in another column the appointment of M^r. L. A. DeWolfe to be Director of Rural Science Schools for Nova Scotia. The duties of the Director are:—To visit all schools taught by one holding a Rural Science Diploma; to interview trustee and parents, to try to secure their co-operation in encouraging agricultural education; to assist the teachers, and report upon their work; to give suggestions about the school gardens; to help to induce the pupils to make and care for gardens at home; to recommend extra government grants to teachers and sections doing this work; to distribute agricultural literature; and in all possible ways to assist in promoting, through the schools, all that pertains to the betterment of rural conditions—*Truro News*

The first Agricultural School Exhibitions for the County of Cumberland, N. S., were held on September 19th at Salem, East and West Leicester, Mansfield and Little River. On the twentieth a final exhibition was held in the Lodge Hall, East Leicester, where all the first prize winners of the various schools met in keen competition. The exhibits were divided into four classes:—Cooking and Sewing (girls over twelve); Cooking and Sewing (girls over twelve); Flowers; Grains and Vegetables. The girls exhibited cake, biscuits, bread, button holes and sewing on buttons, patches, darning, aprons. The flowers shown were sweet peas, asters, poppies, phlox and pansies. Grains and vegetables:—oats, wheat, turnips, carrots, beets, mangels, pumpkins, squash, cabbages, tomatoes and potatoes. The judges were Mr. N. H. Landells, B. S. A.,

of the Truro Agricultural College, Mr. W. W. Baird, B. S. A., and Mr. R. J. Robertson of the Nappan Experimental Farm.

The Northport, Cumberland County, N. S., School had the honour of carrying off four prizes for map drawing and free hand at the Halifax Exhibition in September. The teacher under whose supervision the work was done is Miss Grace Brownell, now of the Amherst School staff.

The Nova Scotia Technical Evening Schools are re-opening with increased attendance and great enthusiasm. Over 500 young men and women registered at the opening of the evening classes at the Halifax Technical College. At Amherst over 200 pupils attended on the opening night. At New Glasgow, Principal McLeod looks for 300 pupils. This school was addressed by Mr. John Fellows, of the Nova Scotia Steel Works, who assured the boys from the Works that those in charge were carefully noting the progress made by their employees in the Technical School. At Westville and Stellarton the attendance promises to be the largest for several years.

In Glasgow, Scotland, the School board can secure by compulsion, if necessary, the attendance at evening classes of all young persons, up to the age of seventeen, who have not completed their elementary school course at a day school.

Professor Robert Matheson, M. S. A., Ph. D., has resigned from the staff of the Nova Scotia Agricultural College to take an advanced position in research work at Cornell University. Dr. Matheson's place as Professor of Zoology and Provincial Entomologist has been taken by Mr. W. H. Brittain, B. S. A. Mr. Brittain is a son of the late Dr. John Brittain of MacDonald College which in itself recommends him, but he has high qualifications of his own for the post. He graduated with honours from MacDonald College, held an important position in the Department of Agriculture at Ottawa, and has been for the last two years Entomologist and Plant Pathologist for British Columbia.

The gold medal offered by the Sir Howard Douglas Chapter of the Daughters of the Empire for the best essay on the Old Government House at Fredericton, was won by Miss Ethel Vanwart. The competition was open to all pupils of Grade VIII in the Fredericton Schools. Mrs. A. J. Gregory, regent of the Chapter, presented the medal to Miss Vanwart at the Model School on Trafalgar Day.

Miss Frances L. Fish, B. A., now teaching at Campbellton, has been admitted as a law student by the examiners at Fredericton, without examination, on her degree. Miss Fish is the only woman to apply for admission since Miss Mabel French, of St. John, was admitted some years ago.

According to the Montreal Telegraph, the Province of Quebec now leads all Canada in the matter of school attendance. The Telegraph attributes this advance to the work done by the government in increasing grants to rural schools, to the campaigns carried out by the Protestant Committee of Public Instruction for the purpose of furthering consolidation, increasing teachers' salaries, and in every possible way increasing the usefulness of the schools in rural communities.

Clarence L. Moore, M. A., F. R. S. C., has been appointed Dean of the Nova Scotia Normal College Faculty, known as the Rural Science Teachers' Training School. This School has now virtually three terms each year: September to Easter, in the Normal College (winter term); Easter to end of June, in the Normal College, special biological course (spring term); July and August (summer term.—vacation course).

RECENT BOOKS.

A book that arrives at an appropriate moment, when our thoughts are being so strongly directed towards agricultural education in the schools, is *Rural Arithmetic, a course in Arithmetic intended to set children thinking on home and its improvement*, by John E. Calfee, Professor on Mathematics at Berea, Kentucky. The book purports to touch the important phases of farm management, and gives practical problems taken from every day farm life. The book contains useful information for farmer and housekeeper and has good illustrations and diagrams (Ginn & Co., 30 cents.)

We have received from the same publishers a very interesting history of *American Literature*, by William J. Long. The plan of this book seems an excellent one. It is in five chapters, each dealing with a period of American Literature beginning with the Colonial Period. At the end of each chapter is a summary, a list of selections for reading, a bibliography, and a very full set of questions and suggestions for research. It is an admirable book for High School or College Classes, or for Reading Clubs. The style is interesting and clear, and the illustrations good. The chapter on Emerson strikes us as particularly discriminating and useful. (Ginn & Co., \$1.35, 481 pages.)

The *Preliminary English Course*, A. M. Walmesley, M. A., can be very strongly recommended to teachers who want help, suggestions and material for English Composition. It is intended for a course in Grammar and Composition for intermediate grades, but the grammar is subordinate to the composition, and there is much more constructive work than there is analysis. There is a great deal of material for constructing sentences, and for reproduction and paraphrasing. A most useful little book. (University Tutorial Press, 160 pages, 1s. 6d.)

The publishers of the "Peeps" series are now bringing out "Peeps at Great Steamship Lines" and have sent us the story of *The Peninsula and Oriental*. In a lively style, the author, G. E. Mitton, describes a modern steamship, the Overland Route, the Suez Canal, gives the history of the Peninsula and Oriental and tells us something about the various ports entered. The really beautiful coloured illustrations add a great deal to the appearance of the book. We recommend it for interesting supplementary reading, or for a prize or gift book. (A. & C. Black, London, 88 pages, 1s. 6d. net.)

A good little book on *Laws of Health for Schools* comes to us from the same firm. This is one of the Edinburgh Medical Series and is written by A. M. Malcolmson, M. D. It is simple, clear and practical in its information and instructions. It contains directions on the care of the skin, hair, nails and teeth, as much elementary instruction

in anatomy and physiology as is essential to our understanding of the laws of health, and a chapter on the causes and prevention of infection. (88 pages, 35 illustrations, 1s. 6d.)

Would that all the children in our schools could have put into their hands such delightful books as the *Sentinel Readers*. The coloured illustrations in Books I and II are enough to charm any child. The reading in Book I is chiefly fairy or nature stories, interspersed with good and simple verse. In Book II, the first selection is an account of Polar expeditions, being in the story of Scott and Captain Bates. The books have been compiled, says the editor, "to be a medium not only of awakening intelligence and imparting knowledge, but of widening the sympathies of boys and girls in all humane directions." (Book I, 143 pages, 10d. Book II, 441 pages, 1s. Edited by E. E. Speight, A. & C. Black, London.)

WITH THE MAGAZINES.

St. Nicholas issues this month its fortieth anniversary number. To one who can remember the charm of it when it was only five years old, it seems to have lost nothing with age, even though in looking back we recall the contributions of Louisa Alcott, Susan Coolidge, Mark Twain and Frank Stockton. This number has a delightful paper under the heading "More than Conquerors" on Sir Walter Scott, his home, his books, and the struggle that made him a hero. In "Books and Reading," the subject this month is "Oliver Cromwell." Teachers who are looking for supplementary reading to interest their classes should see what *St. Nicholas* has to offer.

The Century for November has great variety in both articles and stories. "The Glowworm" by Henri Fabre, author of "Social Life in the Insect World" is very interesting not only for the information it gives, but as an illustration of the patient loving method of study of a real naturalist. The case for the Feminists is put by Edna Kenton in an article called "The Militant Women — and Women." John Corbin writes on "College Democracy" which, he contends is better maintained in Oxford than at the great American Colleges. Mrs. Burnet's story "T. Tembarom" is drawing to an end which will obviously be satisfactory.

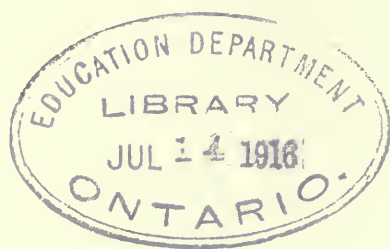
The Canadian Magazine is truly Canadian this month, and full of value to teachers of Canadian history and geography. "The Glory of the Shannon" by Professor Macmechan, the story of the famous sea-fight with most interesting illustrations; "Chateaugay and de Salaberry," by Francis R. Carman, "Canoe, Sail and Stream" telling of early navigation on the Great Lakes, are all full of useful information.

The cream of the best English Reviews and Magazines is to be found in Littell's *Living Age*. "The Welding of the Empire" by Sir Gilbert Parker, in the number for October 18, is a picturesque review of the development of the great Dominions, especially Canada. Timely articles are on "Blundering Social Reform," "The Balance of Power in Europe," and "Some Problems of American Foreign Policy." Lovers of Dickens will enjoy the papers by Rowland Grey and Dr. Spriggs on "The Boys of Dickens" and "The Medicine of Dickens."



"HOLY FAMILY"

From Painting by Ghirlandaio



The Educational Review.

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Living Age, p. 147; Youth's Companion, p. 147.

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EDITORIAL NOTES.

The REVIEW wishes all its readers a very happy Christmas and New Year.

The Public Schools will close for the Christmas vacation on December 19th and re-open on the 6th of January.

A THOUGHT FOR THE NEW YEAR.

"There is no learning that may be compared with learning what love and kindness are; no absolute loss or gain except the loss or gain of love and kindness; no real growth or getting on save by growing more sensitive to love and kindness, more loving and more kind. * * * *

Yes, it is the greatest lesson, the greatest gain, the greatest thing in the world; all life is just our chance of attaining it; nothing else will do instead of it, or be of any lasting use without it; neither shall silver be weighed for the price thereof. It is what makes, as we say, all the difference; it is the true standard of real happiness; and we shall do well to have it for the deepest meaning of our words as we wish one another a Happy New Year."

—Francis Paget, Bishop of Oxford.

THE HOLY FAMILY.

The picture chosen for our Christmas supplement is a "Holy Family" by Ghirlandaio (jeer-lan-dah-yo) a Florentine painter of the fifteenth century.

Let us study it for a few minutes, and try to see what the artist meant to show us.

The centre of the picture is the Holy Child, with the light about His head. He looks up into His mother's face, and stretches out His tiny hands to her. Every other look, save one, is bent upon Him. The lamp and the doves look toward Him, even the little bird in the fore-ground turns its head to gaze at Him. The Virgin bends over Him in reverent tenderness. Her cousin Elizabeth regards Him, with sweet, serious countenance, over the head of her own child, the little St. John the Baptist; and he, his little hands folded as in prayer, is looking intently at the infant Saviour. In the background are the angels; one has let his musical instrument hang idle, while he gazes at the Holy Child; another, with arms crossed on his breast, bends in adoration; while the third alone, of all the group, looks away, and his eyes are uplifted to heaven, and carry our thoughts up

to God Almighty, whom he praises with lute and voice.

The lamb is a symbol of innocence, as the dove is of simplicity and purity of heart. The open book represents the Gospel, the story of God's love. The angels are always thought of in three ways. The wings remind us that they are God's messengers; the musical instruments, that they sing praises to Him; and they are also guardians, "they watch and duly ward." In all the great events of our Lord's life, from His birth to His resurrection, and His ascension into heaven, they attended upon Him. They are always represented as young, because they are in the presence of God, with whom is no time nor change.

The old artist reminds us in this picture how all created things, from tiny bird to holy angel, adore as their Creator the Christ Child whose coming to earth "for us men and for our salvation" we celebrate at this time. And as we look, we hear again the Christmas invitation, "O come let us adore Him, Christ the Lord."

A CHRISTMAS CAROL.

In the bleak midwinter
Frosty winds made moan,
Earth stood hard as iron,
Water like a stone;
Snow had fallen, snow on snow,
Snow on snow,
In the bleak midwinter
Long ago.

Our God, Heaven cannot hold Him,
Nor earth sustain;
Heaven and earth shall flee away
When He comes to reign;
In the bleak midwinter
A stable-place sufficed
The Lord God Almighty
Jesus Christ.

What can I give Him
Poor as I am?
If I were a shepherd
I would bring a lamb;
If I were a Wise Man
I would do my part;
Yet what can I give Him —
Give my heart. —C. G. ROSSETTI.

Is the word "succeed" so stale that we must always say "make good?" Is the word "win" so weak that we must always say "win out?"—Youth's Companion.

BOTANY.

L. A. DEWOLFE.

Each teacher, of course, will use her own initiative in choosing nature study topics. Lest someone, however, is at a loss what to do during the winter, I suggest the following experiments.

EXPERIMENT 1.

Take two tomato cans and fill each to within an inch of the top with wet soil well pressed down. Then sprinkle an inch of loose soil on top of one of these, and leave the other as it is. Weigh them. After leaving them two days in the school room, weigh again. Which lost the greater percentage in weight? To what is the loss due? Weigh again at intervals for a week or two. Keep a record of losses. According to this, which dries faster, loose or compact soil? Apply this fact to cultivated and uncultivated garden soil or farm land during dry summer weather. What is one reason for frequent hoeing of the garden? Would hoeing and harrowing aid or prevent loss of water from the soil?

EXPERIMENT 2.

Does soil contain air? Fill a pickle bottle level full of loose soil. Into this slowly pour water until no more will sink into the soil. What does the water replace? Can you pour as much water into compact soil? Actually try it. What percentage of the volume of loose soil was air? How does that compare with the air percentage in compact soil? Try this with soils in various degrees of looseness.

For arithmetic the results might be tabulated thus:—

Volume of soil.....	a
" of water added.....	b
Therefore $\frac{b}{a}$ = air portion of whole volume.	
" $\frac{100b}{a}$ = air percentage of whole volume.	

EXPERIMENT 3.

Do plants need air about their roots in order to grow?

Find out by trying to grow them in soil deprived of its air. For this experiment try two plants — say corn — in flower pots. Water when necessary;

but in addition keep one flower pot submerged in a pan of water. Compare the growth of the two plants for a month. In case someone objects on the ground that too much water rather than too little air was the cause of poor growth, try growing one plant in a tomato can, which is not porous, and the other in a porous flower pot.

If we discover that roots need air, what is a strong argument in favor of drainage? If roots need air in a small pot or can, would they also need it in a field or garden? What is the connection between experiments 2 and 3?

Briefly, then, every farm operation can be tried in the school-room, but our acquired knowledge should always be applied to the real operations of life.

EXPERIMENT 4.

Will water rise through soil?

Tie a piece of cheese cloth over the bottom of each of two lamp chimneys, and fill each chimney with soil. In one case press it firmly. In the other, leave it loose. Suspend each chimney so that about an inch of its base dips into a jar of water. Does the water rise through the soil? If so, does it rise with equal rapidity? Let this experiment go on for several days. What change takes place in the level of the water in the jar? After the soil in either lamp chimney becomes moist to the top, does the water still continue to lower in the jar? Why? Try a third chimney with compact soil in its lower half and loose soil on top. To what height does the soil become wet?

The water in the jar corresponds to the natural water in the soil, which accumulates from the rain of all seasons and melting snow of spring. What does experiment 4 teach about the reason for cultivation? It teaches the same as experiment 1; but also shows us the source of water that good cultivation may save.

EXPERIMENT 5.

Does the composition of soil influence its power of absorbing and retaining moisture? Fill one tomato can with fine sand, another with clay, a third with loam (sand and clay in equal parts) and a few others with any one of these soils and a varying amount of humus (black swamp mud, or rotted manure, or leaf-mould). To begin, spread each soil in the sun for a day or two to dry. Then weigh a can of each in its dried condition. Next, add water until each soil is soaked. In this

condition, any additional water would run off. Find the percentage increase of weight in each case. This will show the varying powers of soils to absorb water. By weighing these cans daily, find out which dry out more rapidly. Does this experiment show one use humus would have in garden or farm soil?

As soon as danger of freezing at nights is over, pupils should try growing plants in pots of the foregoing soils under the various conditions outlined, and under any other conditions they think of. Thus they learn, first hand, not only how the soil responds to various treatments; but how plants respond to different conditions of soil.

When garden work begins in the spring, refer back continually to the winter experiments, and ask the children what treatment their garden should have, and why. Be sure that they know what kind of soil they are dealing with. Some will tell you it is rocky soil. Let the children learn to recognize soils by their texture; by their "stickiness" when wet; by their color in the case of humus. Some soils are strongly alkaline or acid. Test with litmus paper, and use your knowledge of chemistry in prescribing a remedy. Find whether humus soils are usually acid or alkaline? Try the same with sandy soil. Notice the relationship between acidity of a soil and the kind of plants it grows. For example, try the soil from a mossy spot in a hayfield. Try also, soil that grows sorrel, or blueberries, or lambkill.

Lessons on the origin of the soil are interesting for advanced grades. But since our business is to get all we can out of the soil already in existence rather than to make more soil, let us learn, first, all we can about the treatment required for any desired results. Its physical condition and its chemical composition are largely under our control. Let us learn to control them wisely.

BEFORE CHRISTMAS CAME.

Say, 'fore Christmas came, what you s'pose they did?
 Didn't they have presents then in their stockings hid?
 Didn't they have dolls and drums? Didn't they have toys
 For their little girls then and 'specially for boys?
 Didn't they go to Grandma's? Didn't they have a tree?
 Didn't they hang their stockings up? Where could Santa be?
 Didn't they have Christmas songs? Did school keep just
 the same?

Well! if all that is true, I'm glad that Christmas came.

—Selected.

NATURE STUDY OF ANIMALS

H. G. PERRY.

The nature study work for December might appropriately be introduced by a review of the work of the term, but space will not permit more than a word.

In the June-July number of the *REVIEW* our nature work was mostly directed to birds,—spring migrations, nesting, notes on bird banding, etc. The suggestions for August and the months since have been quite definitely assigned to grades or divisions of the school, and have aimed to introduce the pupils to some of our more common animals, both wild and domestic.

For this month it is again proposed to call your attention to the study of birds. December is in many ways a favorable month for this branch of nature study. Since few birds remain with us during the winter the pupils can soon learn to identify the more common ones at sight, and a good opportunity is also afforded to watch their ways and learn something of their habits, and, moreover, through such study the pupils will be ready for the spring migrants when they arrive.

The first step, the A B C, of bird study is identification. This requires some knowledge of the external features of birds, coupled with a fair appreciation of size and color. As general work for the school the chief external features should be taught, either from an outline drawing made on the blackboard, or better from a mounted specimen. In the latter case small pieces of paper with the names of the parts may be pinned to the bird. Good outline drawings of birds are found in most books on the subject, and in most zoologies, e. g. see Chapman's "Handbook of Birds," and Colton's "Descriptive Zoology," page 210. Many children already know the names of the more important parts; their chief difficulty is in not being able to tell where one part ends and another begins. A little practice will soon set them right in this particular.

All pupils should study such common winter birds as the chickadee, nuthatch and downy woodpecker. These birds are readily identified, and they present some striking contrasts. Work first on the identification, then on the contrasts. But aim to learn something more about these birds, find out all you can about their life habits—the

doing, the active life of the bird. This is that phase of the work that gives it interest, that keeps it ever new and fresh, and makes it a perpetual delight to old and young alike.

Advanced grades should extend the work to other species till all the birds of your locality are included. Make a list of your winter birds, with notes about their calls or methods of communication with one another, their food, their haunts, their habits, etc. Which remain the whole year? Which are migrants? Where did the migrants spend last summer? Note that you find the nuthatch much more in evidence about clearings during December than he was three months ago. He spent the nesting season in the quiet of the woods and now has returned to renew old friendships. Is the same true of the chickadee, and the downy woodpecker? Which of these is the most companionable with man? The older boys know well that the ring of the woodman's axe and the smell of the camp fire will soon attract our little feathered friends, and among the first to arrive is the chickadee. Watch this bird as he flits from tree to tree. Why does he examine so closely every branch and twig? What part of tree does the nuthatch inspect with greatest care? Note the position of his body. Does he work up or down the tree? Note that the nuthatch and chickadee do not overlap their inspection to any great degree. How does the woodpecker supplement the work of each? Are these birds a benefit or an injury to our orchards, shade trees and forests? Tell your pupils about the balance of nature, and lead them to see that these birds and others of their kind, in obtaining their food, help to maintain that balance. But for their careful work our orchards and forests would be overrun by insect pests.

Birds are of great assistance to man, and should be carefully protected, and given every encouragement in their work. As a feeding experiment firmly tie pieces of suet in wrapping twine, and secure to branches of trees that grow just outside the school window, and watch for birds. The chickadee is fond of such food and you will soon see him enjoying a feast. Keep suet in the tree for several days and note what other birds come to the feast. How do they act toward one another when near the food? Is selfishness, generosity, or indifference exhibited? You may find some birds hiding pieces of the suet in the snow.

The covering of birds — feathers, kinds, parts, and arrangement — will provide suitable topics for all grades. The material for study is easily obtained, and the subject should be taken up early as an important part of bird study. A pigeon or hen may be used to advantage in most parts of this work, in fact some such specimen is quite indispensable in showing the feather arrangement of the tail, wings and of the general body covering.

Note that the contour feathers are the covering feathers of the body and that in the wings and tail they are modified into long strong quill feathers, made strong to form the beating surface for use in flying. Note the method of overlapping of the contour feathers, and the smooth surface they present to the air. Is this arrangement of advantage to the bird in flying?

A contour feather, in general, consists of a stiff axial rod, the scalpus or stem with flattened sides towards the outer part forming the vane. The proximal portion of this stem by which it is attached to the dermal layers of the bird is hollow and semi-transparent, and is called the quill or calamus; the distal part, between the halves of the flat vane on either side, is called the shaft or rachis.

The vane is made up of a series of parallel barbs right and left of the shaft. The barbs have, on either side a fringe of small processes, called barbules, which bear a series of hooks on one side, and by the interlocking of barbules adjacent barbs are held together. This arrangement gives the upper part of the vane its close, firm texture, while the barbs of the lower part, not being hooked together, form a soft downy part called the fluff. Notice the reduced fluff in the quill feathers of the wing and tail, and the consequent increase of the firm vane. Why should quill feathers be made this way? Insist on sketches of these feathers by the more advanced pupils.

The down feathers differ from the contour feathers chiefly in the loose arrangement of the barbs, making a soft downy feather or plume. They are best seen in the young nestling; in older birds they are found between and under the contour feathers, and in all cases form an excellent covering for the retention of heat.

The third and last kind are filoplumes or pin feathers. They are hair-like structures with few or no barbs and are readily seen when the other feathers are removed.

The term "pin feather" is often popularly applied to young developing contour feathers, rolled up in the feather sheath. Find these "pin feathers" in chickens or turkeys that are being prepared for market, remove one, and cut open the sheath to show your classes the young feather within. Watch nestlings next summer to see when "pin feathers" first appear, also note at what time of year older birds have them in abundance. What fact does this teach about the covering of older birds?

The close overlapping of the feathers may be compared to the shingles on our houses, both as to arrangement and function. Again they may be compared to the clothing of children, the contour feathers to the outer garments, while the fluff and down serve as warm underclothing.

Note how a bird stands in the rain. It takes a position so that the water finds little resting surface, but must roll down the steep sides and fall to the ground. Verify this by watching the hen, and note well the position of the tail feathers. How does the bird waterproof its coat? Where is the oil gland situated, and how is the oil distributed? What does she use as an oil brush? Account for the saying, that when the hen oils her feathers it is sure to rain.

Are all parts of the body covered equally well with feathers? Part the feathers in various places on the body of the pigeon, and you will find only certain portions of the body bear feathers; these are called feather tracts, and the featherless spaces are known as apteria. Feather tracts differ in different species of birds; note such differences as you have opportunity.

The bill, legs, and feet are usually without feathers. The scales of the legs and feet are inherited from their scale covered, reptile-like ancestors of remote geological ages. Fossils of the oldest birds known to man have been found in the early Devonian rocks, and seem much more like reptiles than any of our present day birds. From certain characteristics of the fossils this form is believed to have been a land bird, arboreal in its habits, and of about the size of the crow. It had true feathers, but differed from our birds in that it possessed teeth, and had a long lizard-like tail of about twenty vertebrae, along the sides of which the short tail feathers were arranged. Have our birds teeth? What has become of the long vertebral tail? Note the part to which the

tail feathers are arranged in our birds. Other fossil forms from the later part of the Devonian Age show that some had already, through loss of teeth, and long tail, approached forms similar to those of our time.

Take up the subject of the ornamental feathers of birds, those ornamental in color or in shape. Note this ornamentation in both domestic and in wild birds. In which sex is it the more pronounced?

The general spindle shape of the body, and the location of the parts and organs will afford topics of interest. Note well the location of the ears, and the thin covering of feathers around them; the eyes with the third eyelid coming out from the inner corner, (we find the remnant of a similar lid in our own eyes); the nostrils, bill, tongue, etc. Expand the wings and hold the bird in a position for flight, and note that the centre of gravity of the bird's body is well below the point of wing attachment. Of what advantage is this to the bird in flying? Does man use the same mechanical device in the construction of his air ships? Watch birds in flight to see if they are all built upon this general plan. At this stage correlate some lessons in physics. The internal structure will also afford some good illustrations for this subject, especially in the line of levers.

The homologies between the legs of the bird and the hind legs of other animals, and between their wings, and the fore legs of quadrupeds, should be made out. In this work first locate the joints, beginning with those next the body. Perhaps the best results are obtained by comparing both wings of birds and fore legs of other animals, with the human arm and hand. In all this work correlate lessons in anatomy and physiology wherever possible, being careful to foster and not to crush the taste for nature study.

CRADLE HYMN.

Away in a manger, no crib for a bed,
The little Lord Jesus laid down His sweet head.
The stars in the bright sky looked down where He lay —
The little Lord Jesus asleep on the hay.

The cattle are lowing, the baby awakes,
But little Lord Jesus no crying He makes.
I love Thee, Lord Jesus! Look down from the sky
And stay by my cradle till morning is nigh.

—MARTIN LUTHER.

CENTENNIAL ANNIVERSARIES OF THE WAR OF 1812

J. VROOM.

XVII.—The Capture of Fort Niagara, and the Burning of Lewiston, Black Rock and Buffalo.

December 19.—Colonel Murray, having taken possession of Fort George when it was abandoned by the invaders, immediately formed his plans to follow them across the river and attack Fort Niagara.

Lieutenant-General Drummond, a distinguished soldier better known as Sir Gordon Drummond, had come to take command of the forces in Upper Canada. When he reached the Niagara frontier, he adopted Colonel Murray's plan of attacking the fort, and resolved to punish the enemy for the wanton destruction of Newark by invading their territory and burning their towns. Where peaceable inhabitants were to be the sufferers, the punishment, of course, would fall upon the wrong persons; but even Sir George Prevost, though always ready for a suspension of hostilities and accused of being too lenient, approved of General Drummond's harsh measures in this case, saying that it lay with the United States government to decide whether the war should be so conducted in the future as to render such acts of retaliation unnecessary. We may or we may not excuse this attitude; but there can be no doubt that at the time of its occurrence the fierce indignation aroused by the burning of Newark called for vengeance.

On the night of the eighteenth of December, Colonel Murray's expedition against Fort Niagara, consisting of about six hundred men, crossed the river and quietly landed some three miles above the fort. At four o'clock on the morning of the nineteenth, the attack was made. The fighting lasted but a few minutes. The fort was taken, and over three hundred of the garrison made prisoners, while twenty-seven cannon and a large quantity of rifles and other military stores fell into the hands of the British. Fort Niagara was held until the close of the war.

On the nineteenth also, as soon as the fort was taken, another detachment of the British crossed from Queenston to carry out the plan of retaliation.

This party burned Lewiston and some of the neighbouring villages, and captured and destroyed Fort Schlosser, near Niagara Falls. Only a broken bridge stopped them from going right on to Buffalo.

December 30.—Ten days later, the British general, having followed up the river on the Canadian side, looking for further revenge, sent a strong force across at midnight about two miles below Black Rock; and on the morning of the thirtieth another detachment crossed above that place. There was some little show of resistance as they landed, but the defenders soon fled to Buffalo. The British followed in pursuit. Again an attempt was made to check them; then the retreating enemy took to the woods and Buffalo was left to its fate. Both Black Rock and Buffalo were relentlessly burned to the ground. The last day of the year saw the whole of the New York frontier along the Niagara, from lake to lake, a waste of charred and blackened or still smouldering ruins; and four of the vessels that had fought in the battle of Lake Erie were included in the destruction.

But this did not end the matter. The next year was to bring still another invasion at Niagara and the burning of another Canadian village, followed by reprisals along the Atlantic coast.

NOTE.

An Ontario correspondent, referring to the REVIEW's Centennial Anniversary series, thinks that to most students the battles of Chateaugay and Chrystler's Farm will appear to be "incorrectly reported;" and is of opinion that the latter was the decisive battle of the war.

The Battle of Chateaugay turned back an invading army, or by coincidence the army turned back just when it met with a show of resistance at Chateaugay; while the sharp encounter on the banks of the St. Lawrence did not turn back the larger army of invaders, nor materially check its advance. These are the essential facts; the rest is a matter of opinion. We may take the view that if the Canadians had fallen back before Hampton's advance at Chateaugay he would have kept right on to the St. Lawrence and there waited for Wilkinson, and that the projected attack upon Montreal would have been made, and would inevitably have been successful; or we may choose to think that Hampton, having effected his full object by making a diversion, would have turned back at the same place or a little farther on if he had met with no opposition. In the first view of the matter, which is the one commonly held in Canada, the little skirmish at Chateaugay was decisive; in the other view, it was of trifling importance. And, in respect to the battle at Chrystler's, or Crysler's, (the latter is said to be the correct spelling of the name according to family tradition — the former is from a contemporary map,) we may suppose that Morrison's attack upon his rear had the effect of changing

Wilkinson's plans and keeping him from going right on to Montreal; or we may conclude that if not attacked he would have halted all the same when he found that Hampton was not waiting to join him. In the one case, Morrison's victory was decisive; in the other, it was but an incident of travel. There is still another view not wholly untenable, which is that both expeditions broke down under their own weight, and the final results would have been just the same if neither had met with any opposition; but this is a view which will not be very generally adopted among Canadians.

NOTES AND COMMENTS. •

The Alumnae Society of the St. John High School are to be congratulated upon their enterprise in bringing Mr. Alfred Noyes to address his first Canadian audience in St. John. Those who had the pleasure of hearing Mr. Noyes lecture, and were charmed by his reading of his poems, will be glad to hear that there is a possibility of his paying another visit to this part of Canada before he returns to England.

In an article headed "No Minstrel of the Camp" the *Toronto Mail and Empire* writes as follows:—"Mr. Alfred Noyes' "The Winepress," in the October number of *Blackwood's Magazine*, is a most moving tale of war. By this composition Mr. Noyes, who is one of the greatest of living English poets, has made himself the laureate of the peace movement. The eight parts of this powerful poem are so many graphic pictures, all but the first two showing vividly the "hell" which war has been declared to be. Through the several infernos of the campaigns the young peasant passes without understanding or will of his own — as if he were in the hands of a Fate, a fate which in the last analysis might turn out to be no more than an armament firm. At the same time, so far as the private in the ranks could bear, all was done in the name of Freedom and Religion.

Matthew Arnold has said: "We should conceive of poetry worthily, and more highly than it has been the custom to conceive of it. We should conceive of it as capable of higher uses, and called to higher destinies, than those which in general men have assigned to it hitherto. More and more mankind will discover that we have to turn to poetry to interpret life for us, to console us, to sustain us." The celebrating of heroic deeds and the stirring of the heroic spirit in men have always been high uses of poetry, but Mr. Noyes has found a still higher use for poetry if he has made it such a criticism, not of life, but

of war, as shall help to bring about the permanent establishment of the truce of God.'

The Alumnae, not satisfied with past achievements, are going on with another good piece of work. They are writing and compiling a history of the St. John High School from 1805 to the present time. It is hoped that this book, which will be of interest to a great many people, will be ready for sale before Christmas.

It is probable that many of our readers have been reading and discussing Winston Churchill's "The Inside of the Cup." The picture that the writer gives of the present day attitude towards religion is unquestionably a realistic and convincing one. About his solution of the problem presented there are different opinions. Perhaps some readers accept it as satisfactory. Those who cannot do so, or who are puzzled what to think, are advised to read an interesting article in the Sunday School Times for November 22nd, where Edward Everett Hale, Jr., writes briefly and directly on the subject from the standpoint of orthodox Christianity.

A lucid and arresting treatment of the main contention of the book will be found in the William Belden Noble lectures for 1911, delivered at Harvard University by Dr. J. N. Figgis, and published by Longmans.

How do you pronounce the name of the author of "John Gilpin?" Webster gives (1) Kooper, (2) Kouper. The writer was taught as a child the first pronunciation, and remembers hearing some one say that the second was adopted to distinguish the poet's name from Fennimore Cooper. The late Alfred Ainger, an authority in literary matters, wrote, "I certainly pronounce his name *Cooper*, because to the best of one's knowledge he so called *himself*, as certainly others called him.

'A riddle by Cowper

Made me swear like a *trooper*,'

are the first lines of a contemporary answer in verse to one of Cowper's poetical charades."

Christmas peace is God's; and He must give it Himself, with His own hand, or we shall never get it. Go then to God Himself. Thou art His child, as Christmas Day declares; be not afraid to go unto thy Father.—Charles Kingsley.

ELEMENTARY AGRICULTURAL EDUCATION.

The N. S. Agricultural College opened at Truro on November 4th, for the regular winter course, with an enrolment of over eighty, of whom quite a number are from New Brunswick and a few from Prince Edward Island. Students completing the two years course at Truro can enter the third year at Guelph or Ste. Anne de Bellevue.

A new building, to be used for investigation and experiment in entomology and horticulture, is to be put up on Bible Hill, directly east of the present Horticultural Building. The expense of this addition to the outfit of the Agricultural College is to be borne by the Dominion Department of Agriculture.

The Agricultural School for New Brunswick will probably be open for the short courses in February.

The P. E. Island Provincial Department of Agriculture is arranging for a long course in agriculture this winter to be held in Charlottetown. It will begin about the middle of November and will be concluded early in April. The subjects included in the course will be Animal Husbandry, Horticulture, Dairying, Poultry, Agronomy, English, Mathematics, Book-keeping, Chemistry and Economics. The practical work will be given in the Agricultural Building, and provision is being made for live stock of all the different classes and breeds, etc. The lectures will be given in Prince of Wales College. A competent staff is already in the Province, and the course will be quite equal to any First Year's Course in Agriculture given at any of the Agricultural Colleges. A limited number of students only can be taken for the first year, not more than forty-six, as some of the rooms are built and equipped to accommodate just this number.

We have heard much of the boys' corn clubs in the corn belt of the United States. The Youths' Companion says: It is not only boys' corn clubs that are showing farmers the way to larger crops and larger profits. Last year a group of school-boys in Cumberland County, Tennessee, formed a potato club. The best yield was 384 bushels to the acre; the next best, 379 bushels; the average for the club, 258 bushels. For the state, the average is only about 80 bushels. All Tennessee now perceives new possibilities in potato-culture.

ENGLISH COMPOSITION FOR DECEMBER.

We know that the minds of all our pupils are full of Christmas,—the holidays, the festivities, and perhaps most of all, the presents to be given or received. Why not turn this to account, and teach something that they will soon need to put into practice, by setting for Composition work "thank you" notes and letters? Incidentally, an important lesson in manners may be learned. "He gives twice who gives quickly," and recognition of a gift is gracious in proportion as it comes promptly or tardily. An older person is gratified by a polite note from a younger one, and the little ones may be impressed with the idea that they can give real pleasure by a careful little letter.

Small people, who have just learned to write, should be allowed pencil letters, or the practice ones may be written on slates.

Give a preliminary lesson, using the blackboard, for the placing of date and address. Another may be necessary for the signature. But with younger children, and for notes of this kind, do not give too much drill on these points. They will understand that a letter ought to show: (a) Where it comes from, (b) when it was written, and (c) who wrote it. A form may be put on the board to be copied.

When they are ready to write, talk to them a little about how they feel when they give a present. Do they want to know whether the other person got it or not? If she liked it? If it was new to her, or if she had another like it? What she was going to do with it? If it made her glad to have them think of her?

Do not tell them to dwell upon these points in their notes. The little talk, which should be as informal as possible, will probably put them in the right mood for producing an acceptable epistle.

Then call each child up separately and whisper in his or her ear what the present is, and who has sent it. e. g. "Pretend that your Aunt in Montreal has sent you a doll." (Care should be taken not to suggest infringement on the prerogative of Santa Claus. There is generally some older person who might frankly send a present in person.)

Then the date and address may be copied from the board, and the "My dear Aunt," or "Dear Mary" with attention to capital letters. Then let them write their thanks in their own words.

The younger children will generally be so proud

of the ability to write a letter of any kind that they will need no urging that it is the right thing to do. At a later stage self consciousness and awkwardness come in, and the excuses "I didn't know what to say," or "I can't write a decent letter," are offered. These difficulties should be anticipated by giving a good deal of practice in note writing; and right feeling in the matter should be stimulated by appealing to the imagination, and a reminder of the Golden Rule. A letter need not be in perfect form to give pleasure, but we owe it to ourselves and to our friends to take pains with it.

The exercises may be varied by having pupils write notes to each other accompanying imaginary gifts; then these notes may be answered. Messages to accompany a gift or a card may be written, and some of the older boys and girls may be glad of help in composing a letter to go with a subscription present, or a missionary donation.

A CHRISTMAS LEGEND.

The Italians have a pretty story about why children get presents at Christmas.

They say that when the Wise Men were on their way to find the Christ Child they were stopped by a woman who was standing in the door of her house.

"Where are you going?" she asked them. "We are going to find the Christ Child," they answered.

"And what are you carrying?" she enquired. "These are our gifts," they said, "for He is born a King, and we must offer Him the most precious things we have."

"I should like to go with you, and take my gift to Him," said the woman; "but first I must sweep my house. Do not wait for me; I will come after you."

So the Wise Men went on their way.

When the woman's house was all in order, it was nearly dark. She made ready her gift, and started after the Wise Men, but they were out of sight. She wandered far and wide, seeking the way to the new-born King, but she never found it.

And now, they say, she comes every year with gifts for all the children, and hopes that some little child may be the Christ Child.

BUSY WORK.

GERTRUDE COUGHLIN.

(Continued.)

Busy Work in Spelling.

Grade 1.—Save the large type letters that appear in the newspapers; many will be found in the advertisements. Handbills may be utilized in this way. When these have been cut out give them to the children to build up words from. For instance, a lesson in spelling has been assigned to a class. Require the pupils to form the words from the letters given. As review work have the pupils build words from a list of printed letters from the board.

Example:—C. O. M. A. T. N. R. H. L. P. E. F. U. S.

Words that may be built: Come, Eat, Get, Mine, For, He.

Grade 2.—Print the endings, at, an, un, on. Make a list of words ending in each:—Ex. cat, mat, pat, rat, that, spat, fan, man, pan, tan, span, gun, sun, fun, nun, run.

Grade 3.—Print a word on the board, and from the letters used in forming the word build words. No letter to be used more than once in the same word. Ex. Congregational. Cat, can, cage, gone, great.

From the reading lesson select the words having two syllables or those having three syllables.

2 syllables.

cun-ning

dow-ny

nic-est

ten-der

wag-gon.

3 syllables.

beau-ti-ful

Un-cle Bob

fu-ner-al

Make a list of the words that begin with a capital letter. A list of the words of four, five or six letters.

Constructive Work.

Material used — beans, peas, cucumber, pumpkin, squash seeds, corn, apple, orange, lemon seeds. All these require soaking overnight, so that they can be readily pierced. Strip the bark off corn stalks, color the pith with Diamond dyes, cut in inch cubes. Gather acorns, horsechestnuts, beech nuts, rosebuds, mountain ash-berries. The nuts must be pierced with a darning needle while

green. A darning needle must be used because the hole thus made is large enough to allow for shrinkage in drying.

Pretty necklaces are made from the smaller seeds, alternate with beads or with larger seeds. String nuts on colored cord, ten or twelve on each cord. String rosebuds ten or twelve on each cord. Hang these alternately to make a portiere for the windows or plant shelf. Another pretty portiere is made with colored paper squares, and one inch pieces of colored straw. Paste straw on the centre of the top of the square and one on the centre of the bottom of the square, paste squares and straws until the string is long enough. This may be varied by pasting straws on the corners of the squares. Circles, triangles, oblongs, ellipses may be used instead of the squares. These make pretty garlands for Christmas tree trimmings.

Pith cubes of different colors and berries, or rosebuds make very pretty garlands. Make a house of cardboard and furniture for the house. At first the work is done under direction and afterwards the child constructs what he wishes. At Christmas time paper boxes may be made by class, paper dolls for baby sisters, paper sleds, skates, tops, in fact numberless toys.

There is an infinite number of varieties of this work. This paper may give you a few new ideas. You will find that by a little thought you will be able to arrange a programme that will help you to accomplish a goodly amount of work in the limited space of time that you have. When you have arranged your programme, follow it systematically, substitute new plans occasionally and success will crown your efforts.

(To be Continued.)

CHRISTMAS READINGS.

In addition to the very full list of Christmas readings published in the Bulletin issued in March, 1909, by the St. John Free Public Library, the librarian has very kindly furnished us with the names of the following books, which are to be found in the library. "The Reciter's Treasury of Verse," containing many poems suitable for Christmas recitations, R. L. P. 27. "Christmas Poems," R. L. P. 27, 2. "The Book of Christmas" by Hamilton Mabie, G. 673.

SOME QUESTIONS FOR COUNTRY TEACHERS TO THINK ABOUT.

"If you cannot make room for agriculture by displacing something else, can you not at least make some of the work you now do face the farms rather than the cities?"

"Can you not draw some of your material for arithmetic from the products of the garden, the field, and the herd, as well as from the store, the bank, or the factory?"

"Can you not make book-keeping, as a record of transactions on the farm, fully as educational as to make it a record of mercantile transactions?"

"Is it not possible to make language lessons more nearly descriptive of what the children see and do in their daily lives, writing up the episodes of vacation with less of the bookish work now done in the name of language?"

"Will not an outline of the farm boundaries with the proper location of the buildings, roadways, gardens, orchards, pastures, meadows, grain-fields, and groves afford ample materials for elementary work in both drawing and geography?"

"Is there not fully as much botany in ragweeds and dog fennel as in ferns and mosses, in corn and cabbage as in seaweeds and pond scum?"

"Is there not some zoology in a brood of chickens as well as in the minute animals found in stagnant water?"

"Is there not something about the winds, the rain, the heat, the cold, the light, the dark, quite as worthy of consideration as the motions of the stars, or perchance the movements of Caesar's army in Gaul?"

"Is not the chemistry of soil-improvement which looks farmward fully as educational as the chemistry of soap-improvement which looks factoryward?"

—Professor Hart, Amherst Agricultural College

THE SINGING WIRES.

Most of us have wondered at the curious "singing" of the telegraph and telephone-wires often heard along quiet country roads. Professor Field of the University of Ottawa suggests that the noises are due to vibrations transmitted to the wires by the posts, which receive them from the earth, and that they are the results of earth vibrations identical with those that the seismograph, or earthquake-detector, records. "The song of the wires," Professor Field adds, "is the song of the barometer; if it is low, a change in the weather may come in two days; if sharp, it may be immediate."—Y. C.

CHRISTMAS QUOTATIONS.

Ye who have scorned each other
Or injured friend or brother,
In this fast fading year;
Ye who, by word or deed,
Have made a kind heart bleed,
Come, gather here.

Let sinned against and sinning
Forget their strife's beginning;
Be links no longer broken
Be sweet forgiveness spoken,
Under the holly bough.

—Charles MacKay.

Dimmest and brightest month am I,
My short days end, my lengthening days begin;
What matters more or less sun in the sky
When all is sun within?—C. G. Rossetti.

Thou whose birth on earth
Angels sang to men,
While thy stars made mirth,
Saviour, at thy birth
This day born again.

As this night was bright
With thy cradle-ray
Very Light of Light
Turn the wild world's night
To thy perfect day.—Swinburne.

Thou whose face gives grace
As the sun's doth heat,
Let thy sunbright face
Lighten time and space
Here beneath thy feet.

Bid our peace increase
Thou that madest morn;
Bid oppressions cease,
Bid the night be peace,
Bid the day be born.—Swinburne.

Rise happy morn; rise, holy morn;
Draw forth the cheerful day from night.
O Father, touch the east, and light
The light that shone when Hope was born.

—Tennyson.

Faint hearts! Christ's message wings not to the glad.
He calls the blind, the lame, the sick, the sad.
The Christmas of the Sorrowful, for sure,
Within His own short span did He endure.

His hours as holy stairs led up to God —
Steps that His aching, bruised feet slow trod.
Dwell ye on this, ye that repine and fret,
That He may lift and walk beside you yet.

PRIMARY NUMBER WORK.

A successful primary teacher recommends the use of the following tables taken from the "Popular Educator."

A few minutes every day spent on tables will not be lost time. If this is dropped, of course the children will forget and not do accurate work. If your children have not had combination work in addition and subtraction, it will be wise to take a little time and teach those tables now. I know I never was sure of my addition until I knew those tables. After I began teaching, an older teacher taught them to me and I felt like singing,

"This is a way I long have sought,
And mourned because I found it not."

As these tables may be new to some of you, I will give them again.

0	$\left\{ \begin{array}{l} 9+1 \\ 8+2 \\ 7+3 \\ 6+4 \\ 5+5 \end{array} \right.$	1	$\left\{ \begin{array}{l} 9+2 \\ 8+3 \\ 7+4 \\ 6+5 \end{array} \right.$	2	$\left\{ \begin{array}{l} 9+3 \\ 8+4 \\ 7+5 \\ 6+6 \\ 1+1 \end{array} \right.$	3	$\left\{ \begin{array}{l} 9+4 \\ 8+5 \\ 7+6 \\ 2+1 \end{array} \right.$
4	$\left\{ \begin{array}{l} 9+5 \\ 8+6 \\ 7+7 \\ 3+1 \\ 2+2 \end{array} \right.$	5	$\left\{ \begin{array}{l} 9+6 \\ 8+7 \\ 4+1 \\ 3+2 \end{array} \right.$	6	$\left\{ \begin{array}{l} 9+7 \\ 8+8 \\ 5+1 \\ 4+2 \\ 3+3 \end{array} \right.$	7	$\left\{ \begin{array}{l} 9+8 \\ 6+1 \\ 5+2 \\ 4+3 \end{array} \right.$
8	$\left\{ \begin{array}{l} 9+9 \\ 7+1 \\ 6+2 \\ 5+3 \\ 4+4 \end{array} \right.$	9	$\left\{ \begin{array}{l} 8+1 \\ 7+2 \\ 6+3 \\ 5+4 \end{array} \right.$				

These are learned 9 and 1, 8 and 2, 7 and 3, 6 and 4, 5 and 5, always make the right-hand figure 0. If thoroughly known and drilled, and repeated to whenever a mistake is made, there will soon be no mistakes. Your children ought to tell you 94 plus 8, as easily as 4 plus 8; 72 minus 9 as easily as 12 minus 9.

Many plants, trees and flowers owe their peculiarities to their connection with the birth or the childhood of Christ. The *Ornithogalum umbellatum* is called the "Star of Bethlehem" according to Folkard, because "its white stellate powers resemble the pictures of the star that indicated the birth of the Saviour of mankind." The *Galium verum*, "Our Lady's Bedstraw," receives its name from the belief that the manger in which the infant Jesus lay was filled with this plant.—*From the Book of Christmas.*

TEACHERS' INSTITUTES.

The thirty-sixth annual meeting of the Northumberland County Teachers' Institute was held in Blackville, N. B., on October 30th and 31st. Principal G. H. Harrison presided, and Inspector Mersereau and Director Steeves were present at all sessions. At the opening meeting Inspector Mersereau spoke on the importance of teachers' influence, and the increasing burden thrown upon them by the parents of the present day. He deprecated "fancy" work being done by the teacher at recess.

Director Steeves urged the correlation of school work with home interests, especially along agricultural lines. Teachers' salaries will increase, he said, as soon as the home realizes the direct benefit of the school work.

Excellent model lessons were given by the Blackville teachers, as follows:—

Number Work with Primary Children, Miss May A. Underhill.

Writing, Grade IV, Miss Stella C. Power.

Current Topics, Grades VII and VIII, Principal Ryder.

In the afternoon these lessons were discussed, and the lesson on current topics, which covered a wide range, won particular approval from Inspector Mersereau and others. The Inspector said that every teacher should take a daily paper to school and use it. Principal Stuart emphasized the importance of teaching current history.

Director Steeves gave a full and instructive address on Agricultural Education, insisting especially on the importance of school gardens. He hopes to see 100 school gardens in New Brunswick next year, where now there are but twenty-three.

At the Public Meeting on Thursday evening, the opening address was given by the Inspector; Mr. D. G. Schofield, Secretary of the School Board, gave the address of welcome. Music was provided by the Blackville orchestra and several soloists, and speeches given by President Harrison, Principal Stuart, Director Steeves and others.

In an interesting address on Vocational and Industrial Education, Mr. Herman S. Murray of Chatham, drew attention to the need of this branch of education to prevent idleness and poverty.

Principal Stuart pleaded for intelligently effective compulsory attendance laws, and for more consolidation. He pointed out that Blackville is an ideal place for a consolidated school. Director Steeves, at the request of the Inspector, supplemented Mr. Murray's address by speaking on the Agricultural side of the question.

On Friday morning Miss Ida C. Lynch read a paper showing how she and several other Chatham teachers had taught primary nature work. This paper was very favourably commented on. Mr. Murray then read a paper on Manual Training. He said that forty-five per cent. of those who leave school too early do so because they find it dull. The present system, he said, tends to discourage manual work. But if boys were properly taught it in school, it would hold their interest; they would feel that they were learning something useful, and take to manual work more readily when they left school.

Principal Hetherington graphically described some of the great technical schools in Liverpool, Belfast, Hamburg and Geneva.

A valuable paper on How to teach. Bailey's Botany to advanced grades, was sent by Dr. Cox of the University of New Brunswick, and read by Inspector Mersereau. It was resolved to ask the Chief Superintendent to have this paper printed in the Educational Report.

On Friday afternoon Mr. Barry, in a paper on Physical Training, dwelt upon the importance of such training to the physical, mental and moral health of the child.

The following officers were elected for the coming year. President, L. R. Hetherington, M. A.; Vice-President, Miss Ida C. Lynch; Secretary-Treasurer, H. H. Stuart; Members of Executive, Miss Sadie B. Hogan and Miss Jessie Fowle. The next meeting will be held in Chatham on the last Thursday and Friday in September.

The first session of the Albert County Institute opened at ten a. m. with an address on Agricultural Education by Director R. P. Steeves. This talk was filled with valuable information and suggestion, and much interest was shown in the discussion which followed. As long as he could remain Mr. Steeves was kept busy answering questions.

The afternoon session opened with the President's address dealing with the advantages of the small

institute and urging the addition of a Trustees' Section.

A paper on Plasticine written by Miss Grace McIntyre, Riverside, was read by Miss M. A. Patterson, and models were exhibited which had been made by the writer's pupils. The educative value of plasticine modelling was emphasized as well as its use in providing profitable and attractive employment for the smaller pupils on the many occasions when this is difficult to find.

Inspector F. A. Dixon followed with a talk on what an inspector expects of a teacher; asking also for some views of what the teacher expects of the inspector. Mr. Dixon's address was illuminated with anecdotes both humorous and illustrative. A rather interesting discussion followed in which Mr. Edmunds and others answered the Inspector's question.

The rest of this session was taken up with a question box which evoked more general discussion than any other number on the programme.

On account of the fact that Friday's sessions must close early for the train's departure, Thursday's evening session had to be partly devoted to the regular programme. It opened with an address by the President, A. W. Seaman, M. A., "Responsibilities of Parents," in which an attempt was made to show from the teacher's point of view the duties of parenthood.

Then followed brief but interesting addresses by Councillor Killam and R. E. Smith, expressing a hearty welcome to the teachers.

Mr. Bruce E. Berry, Hopewell Cape, then gave an interesting paper on Literature in Country Schools, dwelling on the importance of the subject and the necessity of considerable supplementary reading.

Miss Mills read an instructive paper on the teaching of writing. She advocated the universal use above Grade IV, of muscular movement and more earnest attention to the subject than is usual in our schools.

Both papers were discussed by Mr. Edmunds, Mr. Dixon and others. This meeting was held in the Agricultural Hall and was largely attended by an appreciative audience. The proceedings were enlivened by a number of old songs sung by the whole audience.

The first session on Friday morning was taken up with the election of officers for the ensuing year and a talk and lesson on the teaching of music

by Principal Edmunds of Hillsboro. The speaker illustrated his method of teaching sight-reading very clearly, and a great deal of valuable information was crowded into a short time.

On opening again Mr. A. S. McFarlane of the Provincial Normal School was heard in a fine paper on "History, Why and How to Teach it." It was replete with useful suggestions for practical work, and the ultimate educative purpose of the subject was strongly emphasized.

Votes of thanks were tendered to Mr. McFarlane, the people of Elgin, the Press and the retiring officers.

The Institute then closed in time to catch the afternoon train.

Considering the difficulty of reaching and leaving Elgin and of making the time-table suit the trains, this institute was largely attended and interesting throughout; and it is a notable fact that every member attended every session.

The officers for 1914 are:—President, Principal Edmunds, Hillsboro; Vice-President, Miss M. A. Patterson, Riverside; Secretary, Miss Alice Thistle, Hillsboro;

Riverside was chosen as the next place of meeting and the week preceding Thanksgiving as the date (subject to change by the executive.)

HANDS ACROSS THE SEA.

The circular of the Hands Across the Sea movement for 1914 has been received, and can be had from the honorary local secretaries, Mr. G. A. Inch, Normal School, Fredericton, and Miss C. A. James, 135 Lockeman Street, Halifax, or from the REVIEW office. The programme of the tour is similar to that of former years, and will include visits to England, Scotland, Wales, and possibly Ireland. The entire cost from Montreal will be about \$235.00, and the party will sail on or about July 3rd. Details of arrangements will be published in supplementary circulars. All who wish to make the tour should send in their applications early, together with the registration fee of \$1.00.

WHERE THE POETS WORKED.

The sixth grade of a certain school in a foreign settlement in South Dakota was learning the use of possessives.

The book required the pupils to correct and expand into a complete sentence the following expression: "Milton and Shakespeare's works." Joseph Nikodym handed in this sentence: "Milton and Shakespeare work in a coal mine."

GETTING READY FOR SANTA CLAUS.

CHARACTERS.—(Four little girls.)

AGNES,
CORA,

BELLE,
DOROTHY.

SCENE.—A room containing table. Around this are four dolls propped up in chairs. A fireplace is in the room. (The latter can be imitated by pasteboard.)

AGNES.—Of course our dolls must have Christmas.

BELLE.—Yes, and we must hang up their stockings this very night.

CORA.—Let's take our doll's stockings right off and hang them up. (Girls stoop and take off the doll's stockings.)

DOROTHY.—Let us hang them in a row by this fireplace.

AGNES (peeping up chimney).—How do you suppose Santa Claus ever gets down this chimney.

BELLE (All the little girls peep up the chimney).—Oh, I should think that he would stick on the sides.

CORA.—What if he should get stuck here when he was half way down!

DOROTHY.—Then he couldn't get up and he couldn't get down.

AGNES.—What if Santa Claus' reindeer should run away with him?

BELLE.—Then all the lovely presents would be spilled out.

CORA.—That would be dreadful; wouldn't it?

DOROTHY.—Now I will stand up on this chair and hang up all the stockings. (Hangs up the tiny stockings.)

AGNES.—My doll wants a new piano.

BELLE.—My doll wants a workbasket.

CORA.—My doll wants a box of water color paints!

DOROTHY.—And my doll wants a sled and game of Jack Straws.

AGNES.—Now how can Santa Claus get all those things in those stockings!

Those wee, tiny stockings!

BELLE.—I don't really see myself. Let's run and ask Mama how he can do it. She will know. Mama knows everything.

(Little girls all run off.)

The regular Bi-annual Meeting of the
Saint John County Institute
 will be held in the Saint John High School Building
December 18th and 19th

THURSDAY, DECEMBER 18.

FRIDAY, DECEMBER 19

10 a. m. Opening and Enrolment
 Music by High School Orchestra
 Address by President
 INSPECTOR W. M. McLEAN
 11 a. m. "Manual Training in Primary Grades"
 DIRECTOR F. PEACOCK
 2 p. m. "Composition"
 Primary Grades — MISS J. MILLIGAN
 Advanced Grades — PRINCIPAL W. H. PARLEE
 3 p. m. "Arithmetic"
 MISS GERTRUDE WEBB
 Question Box

9 a. m. "Drawing"
 MISS T. McCLELLAND
 10 a. m. "Writing"
 PRINCIPAL M. D. BROWN
 11 a. m. "Nature Work"
 MR. A. GORDON LEAVITT
 2 p. m. "School Gardening"
 DIRECTOR R. P. STEEVES
 3 p. m. "Rewards and Punishments"
 PRINCIPAL S. A. WORRELL
 Discussion DR. H. S. BRIDGES
 General Business. Election of Officers.

W. M. McLEAN, B.A., President

IDA A. KEAGIN, Secretary

A CHRISTMAS CAROL FOR CHILDREN.

TUNE — OLD HUNDRED.

(This might be put on blackboard in large letters and sung by everyone present at the end of the Christmas exercises.)

Good news from heaven the angels bring,
 Glad tidings to the earth they sing;
 To us this day a Child is given
 To crown us with the joy of heaven.

Praise God upon His heavenly throne,
 Who gave to us His only Son;
 For this His hosts, on hoyle wing,
 A blest New Year of mercy sing.

—MARTIN LUTHER.

One Christmas Eve a peasant felt a great desire to eat cabbage and, having none himself, he slipped into a neighbour's garden to cut some. Just as he had filled his basket the Christ Child rode past on His white horse, and said: "Because thou hast stolen on the holy night, thou shalt immediately sit in the moon with thy basket of cabbage." And so, we are told, "the culprit was immediately wafted up to the moon" and there he can still be seen as "the man in the moon."—*From the Book of Christmas.*

SCHOOL AND COLLEGE.

It has been agreed that the "Interprovincial Education Convention of the three Atlantic Provinces will be held in Halifax on the 26th, 27th and 28th of August, 1914, instead of on the alternative dates suggested on the October "Journal of Education" for Nova Scotia.

A Joint Institute of the teachers of South Colchester and East Hants was held on the 27th and 28th of November at Stewiacke, N. S. About 100 teachers were present, with Inspectors Campbell and Robinson.

An Institute of teachers for the six Eastern Counties of Nova Scotia, will be held during the last week before the Christmas vacation at Hawkesbury, Inverness Co.

Mr. Arthur Carter, the Rhodes Scholar for 1913 from the University of New Brunswick, has begun his residence at University College, Oxford. The University's Rhodes Scholar for 1911, Mr. Jack McNair, is at the same College. Mr. McNair took first class honors in jurisprudence in two years, and is now reading for the degree of B. C. L. He is a member of University College football team and also President of the Colonial Club.

Dr. G. R. Parkin, speaking recently in Montreal of the progress of Rhodes Scholars at Oxford, said: Canadians have been particularly successful in the schools during the past year. They have taken nine firsts in the honor schools, the Newdigate prize poem, the Gladstone prize, and one or two law exhibitions. Our scholars find that strenuous work from beginning to end of the three years course is necessary, if they are to compete successfully with men from the English public schools. No effort should be spared in Canada to send first rate representatives to Oxford. We can't keep the standard too high."

Dr. Parkin adds that the Rhodes men draw other students to Oxford from their respective countries and that last year there were over fifty Canadians studying there.

The regular bi-ennial meeting of the Saint John County Institute will be held in the Saint John High School Building December 18 and 19.

Sir Maxwell Aitken has offered one thousand dollars a year for scholarships to pupils of Harkin's Academy, Newcastle, N. B. Messrs. A. A. Davidson, E. A. McCurdy and W. A. Parke are named as trustees to control the funds and allot

the scholarships. This generous gift gives the Academy a prize list much more valuable than is possessed by any preparatory school in the Maritime Provinces, and should be a means of bringing talent to the front.

Dr. Silas Alward, Dean of King's College Law School opened the lecture course of the school in St. John on Tuesday, November 11th, with a lecture on the Evolution of Chancery.

Professor Chesley Martin of the University of Manitoba, formerly of St. John, and the first Rhodes Scholar from New Brunswick, is winning great success in Winnipeg, as a history lecturer. Last winter he gave a course of the lectures on "Conflicts in Manitoba," which are to appear in book form. He has now begun a course of six lectures on social and political conditions in Manitoba. These lectures are open to the public, and are given with the avowed object of popularizing the study of the history of Western Canada.

The official report of the Mount Allison Institutions for last year gives the number of students in attendance as follows:—Arts and Engineering 196; Theology 45; Ladies College 422; Academy 195. Total 858. Allowance for students counted twice makes the total number enrolled 733. —Sackville Tribune.

From the Acadia Bulletins for October and November we glean the following facts about the Acadia Institutions. There are seven buildings used for teaching, and forty-seven professors and teachers. The trust funds have been increased this year by over one hundred thousand dollars, and the total is now over half a million.

Two new classes have been formed in the Technical School in Yarmouth, N. S. One is a Millinery class, and the other is instructed in the Isaac Pitman System of Stenography.

Calgary is reported as the first Canadian city to establish a pre-vocational educational system. The system will be put in operation early in 1914. The idea has been fostered by Mr. T. B. Kidner, director of Technical Education.

Calgary has a supervisor of play grounds, and has gone far to solve the problem of how to keep boys and girls out of the streets. To meet this difficulty in winter time the playgrounds committee of the Board of Education propose to establish two open air skating rinks, one for boys and one for girls, for every public school having more than eight rooms.

Wolfville High School Commencement exercises took place in the Opera House, Wolfville, N. S., on the evening of October 14th. After an excellent musical programme, prizes to the amount of one hundred and twenty-five dollars were presented to the students of last year for high standing at the Provincial examinations. By frequent applause, the enthusiastic audience which filled the Opera House, attested its appreciation of the work of Principal Ford and his pupils.

Professor S. M. Dixon, who is well known in Canada, has received the important appointment of Professor of civil engineering at the Imperial College of Science and Technology in London. Professor Dixon, when at the University of New Brunswick, was one of the most popular of the University Extension lecturers. He was afterwards on the staff of Dalhousie University. Of late years he has been Dean of the Science Faculty of Birmingham University.

The Lieutenant Governor's silver medal awarded to the pupil who wrote the best papers for entrance at Fredericton High School, was won by Miss Helen Richardson, daughter of the Bishop of Fredericton.

Fredericton High School has organized a debating society, with Mr. J. T. Hebert as President.

His friends are congratulating Mr. Sydney Ingraham, who won the Asa Dow Scholarship at the University of New Brunswick. Mr. Ingraham's early home was Temple, N. B.

Miss Faith D. Henderson of St. John High School, daughter of Mr. George A. Henderson, is the winner of the gold medal offered by the late Hon. John V. Ellis for the best English essay. The subject was Ideals, and their value.

The Fortnightly Club prize for English in Grade XII of the same school was won by Miss Mattie Levi.

Bridgewater, N. S., is to have a new school building. Many people were present at the laying of the corner stone and speeches were made by the Superintendent of Education, Inspector McIntosh, Principal McKittrick of Lunenburg, and others.

The Natural History Society of St. John offers in all four courses of lectures this winter. The Tuesday evening lectures are very much along the lines of the regular work of the society, and the first course given on Thursday afternoons consists of six lectures illustrative of objects in the Museum. In the free afternoon lectures to be given after Christmas the Ladies' Association are taking up the timely and important topic of Home Economics. Some of the lectures are to be delivered by teachers of the subjects treated, and they should all be largely attended. It is coming to be recognized more and more that the Society is doing valuable educational work in St. John.

St. John teachers are likely to have an increase of salary. The teachers' Committee of the Board of School Trustees passed a resolution recommending an increase of \$100 a year to the salaries of all teachers in the public schools. If the resolution is adopted the principal of the High School is to have an increase of \$200, and reserve teachers will get \$50 extra pay.

St. John is not alone in this movement in the Maritime Provinces. If the new schedule approved by the Committee of the Halifax Board is adopted by the Trustees, the teachers of Halifax will also receive a substantial addition to their present salaries. The scale for teachers in the common schools below Grade VIII is as follows:—First Class A teachers will begin with \$500, increasing in four years to \$650; for Class B salaries will range from \$470 to \$570; and for Class C, from \$440 to \$520.

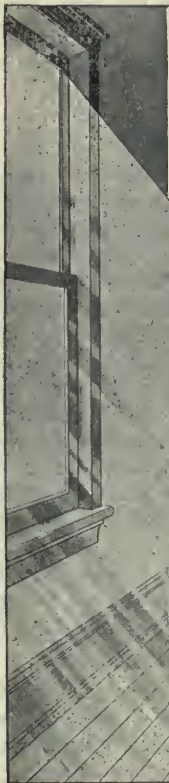
Mr. Sydney Jones of Springhill has won the Stevenson Scholarship, tenable for two years, at the University of King's College.

Miss Vera H. Brooks has been engaged by the School Board at Southampton, N. B.

McGill University has conferred the honorary degree of Doctor of Laws on Sir Gilbert Parker and Mr. F. R. Benson, the Shakespearean Scholar.

THE YOUTH'S COMPANION CALENDAR FOR 1914.

The publishers of The Youth's Companion will, as always at this season, present to every subscriber whose subscription is paid for 1914, a Calendar for the new year. It is a gem of calendar-making. The decorative mounting is rich, but it is subordinated to the main purpose to produce a calendar that is useful.



A Ray of Sunlight

in a darkened room reveals countless floating dust particles made up of dirt and germs of disease. All this you breathe.

STANDARD Floor Dressing

catches these particles, once they settle on the floor, and holds them there. It keeps the air clear and pure, besides preserving and beautifying the floors.

Write for free booklet on dust dangers and how to avoid them.

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CURRENT EVENTS.

An Austrian scientist has made a discovery which, it is believed, will make it possible to extract radium from a new source and at a much lower cost of production.

A new method of typhoid vaccination, more efficacious than any of the other methods in use, is reported from California.

A Canadian physician has found a cure for leprosy, and several patients under treatment in the Tracadie hospital are said to be either completely cured or much improved.

Red rain, a very rare phenomenon, recently fell at Gibraltar. The colouring matter is supposed in this case to have come from a sand storm in Africa.

Enough bones of the horned dinosaur to form a complete skeleton have been found in Alberta. The prehistoric creature, the remains of which were first discovered in 1876, stood about five feet high, and was fifteen feet long.

The whale is disappearing, on account of the very active whale hunting being carried on at present. No less than thirty Norwegian companies are engaged in this work off the eastern and western coasts of Africa.

The census shows a slight increase in the Indian population of Canada, and an improvement in general conditions. There is an increase in their cattle industry, in their area of cultivated land, and in their income from hunting and fishing.

It has taken three years to construct the piers for the Quebec bridge, which are now finished; and it is expected that three years more will elapse before trains can run over the bridge.

Armored aeroplanes are built in both France and Germany. In Russia an aeroplane has carried ten passengers, in addition to its crew, and enough fuel for twenty-four hours. Yet it is said that Great Britain leads in the construction of military aeroplanes, which will be an essential part of the equipment of every army in the future.

A railway now extends along the coast of Chile from Iquique to Puerto Montt, a distance of over eighteen hundred miles. When completed, this line will run from the frontier of Peru to the Strait of Magellan.

Over a very large area of Australia, and especially where the rainfall is light, there is an apparently inexhaustible supply of water which can be reached by boring. In this way much has been added to the value of large tracts of country, both for stock raising and for general productive purposes. For some time the South Australian government has been boring for water on the southern limits of the artesian basin, in the neighborhood of Lake Frome; and last month a supply of good water was tapped yielding two thousand three hundred gallons a day.

It has been found that rubber of good quality can be made from the milky juice of our common wild lettuce.

Hudson Bay fisheries are to be thoroughly investigated by the Canadian government, as it is expected that with the opening of the Hudson Bay Railway a large fishing industry will be developed. The number of steamers entering Hudson Bay this year has been the largest on record.

It is claimed that some of the eucalyptus trees of Australia are taller than the California redwoods, which are commonly considered the tallest trees in the world.

The Russian government has established wireless stations to notify vessels when the entrances to the Kara Sea are free from ice.

The F-rays, which are said to be capable of igniting explosives at a distance, may put an end to war as it is now conducted and take us back to the days of hand to hand fighting. The stores of ammunition upon which our fleets and armies now depend would be useless if they could be exploded by an enemy long before the hostile fleets or armies came within range. It is not strange that forms of radiant energy which we can neither see nor feel should have remained so long unknown. The waves of wireless telegraphy are many miles in length; those of light only about one-fifty-thousandth part of an inch long. Between these there must be many rays capable of producing effects hitherto unrecognized; and it is not incredible that we may yet discover and use other forms of radiation, the waves of which we can neither see nor hear nor feel.

The world's greatest living poet is a Hindu named Tanore, to whom the Nobel prize for the best literature of the year has been awarded. Some of his works have been translated into English.

A hundred and forty thousand Asiatics in Natal demand the removal of race distinction in the new immigration act which prohibits migration from one province to another. The situation is very grave, and there is strong feeling in India that the Imperial Government should intervene. Such intervention would in itself be a serious matter, as in South Africa the question is held to be of purely local concern.

On the twenty-fourth of November Californians celebrated the two-hundredth anniversary of the birth of Serra, the Franciscan missionary who founded many of the old missions for which California is famous. He and his followers brought the Indians under control, and introduced the cultivation of the olive and the grape. The beautiful buildings which they erected are still the pride of that country, and have given rise to a style of architecture now widely adopted throughout southern California and the adjacent states.

An aerial cableway seventy-five miles long will be built in northern India, where conditions make a railroad impracticable.

The British and German governments have sent war ships to Mexican waters to protect their national interests. The government of Japan is also sending a ship, which is important as an indication that Japan claims the right to be consulted in international affairs.

The President of the United States has declared in his last message to Congress that there is no government in Mexico, the rule of General Huerta being only a military despotism with the collapse not far away. What will happen then perhaps he knows. Many think that the Mexicans themselves will be unable to restore order and set up a stable government, and that the United States, if called upon to do so, would find it a long and difficult task. Meanwhile it is reported that seven generals of the Mexican government forces have surrendered themselves to the rebels, and that the latter are practically in full control of all the northern part of Mexico.

The course of events in Mexico has found a remarkable parallel in the recent occurrences in China. The Chinese parliament has been suspended by presidential decree, and replaced by an administrative conference more ready to carry

out the wishes of their ruler. And, though there are no revolutionists at present in the field in China, a wide-spread plot to overthrow the government has been discovered.

THE MAGAZINES.

With such names in the list of contributors as Archibald Lampman, Wilfred Campbell, Pauline Johnson, J. D. Logan, Jean Blewett, Arnold Haultain, Isabel Ecclestone Mackay, Madge Macbeth, Virna Sheard, Robert Barr, and Mrs. Arthur Murphy, *THE CANADIAN MAGAZINE* for December is a noteworthy number. Because of the eminence and long silence of the author, the ballad, "The Settler's Tale," by Archibald Lampman, is given first place. It is a sad tale of a pioneer who first digs a grave in the wood to bury the wife who had borne a child, and then, after a few years, he has to dig a grave for the child. The simple pathos of this ballad is very touching. Although Lampman has been dead more than ten years, this ballad never before has appeared in print. The whole number is one of unusual interest, with beautiful reproductions of paintings by J. W. Morrice, John Russell, Archibald Browne, Laura Muntz, Lawren Harris, Gertrude Des Clayes, J. E. H. Macdonald, R. E. Johnston, and a silver medal photograph by M. O. Hammond.

The "Christmas Stocking" number of "St. Nicholas" is a foretaste of the holidays' treats. There are some charming illustrations by Arthur Rackham, other funny pictures and verses, the usual short stories, one of a little girl who fell asleep over "Through the Looking Glass" and met "Alice" in dreamland. "Miss Santa Claus of the Pullman" is finished, and there is an interesting sketch of the author, who is a great favourite with "St. Nicholas" readers.

TO OUR SUBSCRIBERS.

Statements of accounts will be sent out to our subscribers, as usual, in December and January. To the individual the amounts are small, but they are large in the aggregate, and prompt remittances will be appreciated.

It is especially important that those who are in arrears should send in their dues, in order that the old management may be closed, and the new arrangements fairly started.

The "Review" is sent to an address until ordered to be stopped. Naturally we wish to keep our subscribers as long as possible, but if they wish us to discontinue the paper, it may easily be done by sending a request to that effect.

We thank those of our readers who have already sent in their subscriptions for the current year. We appreciate their continued interest in the "Review", and trust that they will find it as useful in the future as it has been in the past.

Educational Review.

Devoted to Advanced Methods of Education and General Culture

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THE EDUCATIONAL REVIEW,
St. John, N. B.

The articles by Mr. L. A. DeWolfe, Director of Rural Schools in Nova Scotia, which will appear in the REVIEW during the winter months are intended primarily for teachers who will have school gardens or home gardens next summer. They will be of great assistance to those foresighted teachers who are now planning their outdoor work and getting their pupils ready for intelligent school gardening in the spring.

A serious error appeared on the first page of the December REVIEW, where it was stated that the schools would re-open on sixth of January. The correct date, the fifth, was given in the official calendar. The REVIEW offers a sincere apology to its readers for any trouble that this regrettable mistake has caused.

The REVIEW makes its first appearance in 1914 with a new title page. The border was designed for this special purpose by Miss Emma Jack, of St. John, and engraved by the F. C. Wesley Company. Mr. James Vroom, of St. Stephen, kindly contributes the following description of the Partridge Berry, the plant chosen by the artist as the model for her graceful design:

A pretty little trailing evergreen that hides its leaves and its bright red berries under the snow, Mitchella, otherwise known as the Partridge Berry, is one of the first woodland treasures we seek in early spring. It is truly perennial in its attractions, for before the ripened fruit has fallen the twin flower buds of the new growth appear. It is found throughout the eastern part of North America, from the Gulf of St. Lawrence to the Gulf of Mexico; and delights in open woods, where it is more or less sheltered from storm and sunshine by the surrounding trees. Its spreading leaves are always fresh and green. Its pliant branches lie prone upon the ground, knowing nothing of the struggle for existence; happy and content, and at peace with all the world. Its two white blossoms for each berry are barely lifted into view. They are trumpets in unison heralding the approach of summer; who, according to Indian legend, is the beautiful queen of the flowers. And what better symbol of unity than their united fruits? The grace and beauty of the plant, no less than its associations, have suggested its outline as a suitable motive in the decoration of the first page of the REVIEW. May the REVIEW always bring as much pleasure to its readers as Mitchella brings to those who love the woods.

TALKS WITH TEACHERS.

What definite aim in training the character of your pupils have you set before you in this New Year? There is a regular plan for their mental training. Certain subjects are to be studied, and certain portions completed during the year. So many pages of the readers, so many chapters of Caesar or history are to be mastered, such and such a degree of skill is to be acquired in drawing or mathematics, within a fixed time. Is there any such plan for moral training?

Progress in reading and writing, in Latin or Algebra, is tested by examinations, and promotion depends upon it. Testing in moral virtues, in steadiness, honesty, truth, perseverance, courage, is going on all the time, and consciously or not, every boy and girl is "graded" into the class where they belong. And the final examination, so far as the school is concerned, has to be taken when the pupils go out into the world where teachers and parents can no longer relieve or shield them.

We have lately heard the accusation, made by a man who employs large numbers of young people, that no real effort is being made in our schools to teach the importance of responsibility. Boys and girls, he said, when it is time for them to go to work, accept positions without appearing to realize that what they have sold is their best efforts.

We all suffer from this lack of responsibility in others; broken promises, unfulfilled engagements, slipshod work, glib excuses, irritate and hamper us daily. Some of us may regret the lack of training that causes us ourselves to plead guilty to such failures; or we may look back gratefully to the high standards and exacting strictness of our elders that fixed us in better habits.

The sense of personal responsibility is a very hard thing to inculcate. The very breadth and complexity of the task may bring a feeling of hopelessness. But, for a beginning, insist upon the stern obligation of the given word. Make this the aim for this year. Set up the standard that every engagement must be met, every promise kept. Much may be done by example, but not all. Example must come first, and be unflinching, but precept too, is needed. Teach the duty of careful consideration before a promise or an agreement is made. The act promised may be trifling, the promise is always important. It is so easy to say "I will," without thinking or knowing how hard it may be to carry the word into action.

Be exacting in the matter. Expect the pupils to teach the standard. A surprised, "But you said you would," a complete setting aside of all mere excuses, will drive home the lesson, where other means have failed.

WINTER PLANS FOR SUMMER GARDENS.

L. A. DEWOLFE.

During the winter have the children draw plans of their future gardens. Let them decide what they want to grow. Then have them learn as much as they can about that crop—the kind of soil it needs, the length of season, the time to plant, the time to harvest, the kinds of fertilizer, cultivation, etc. Which needs more water, corn or strawberries? Find out older people's experiences and test their theories to see if they be true. Knowing the relative amounts of water needed would enable one to know which crop to put in a moist, deep soil; and also which one would stand the hot, dry, shallow soil of another part of the farm.

What to Plant next Spring.

Each child will have some special crop of his own choosing. Besides this, however, I should strongly urge potatoes and strawberries for the first year. The second year, the strawberry patch would supply enough new plants to cover the potato ground of this year. One hundred strawberry plants set out this spring will supply the family moderately well next year. The planting and first year growth will afford several interesting topics for Nature Study. There will be a variation in the blossoms of different varieties. Some will have no stamens. Others will. What does this signify? Will those that have no stamens produce berries? Watch them. Some pupils will discover that they do. Others will report in the negative. Why the disagreement in reports? Possibly one pupil had different varieties in the same field and another had only one variety. Did it seem to make any difference whether that single variety were one with stamens or not? Did all varieties have pistils? Let the teacher become thoroughly acquainted with this phase of the subject; and, then, direct the pupils' observations.

Watch the effect of late spring frosts on strawberry blossoms. What part was affected? What might have prevented it?

Watch the "runners" that form later in the season. When do they begin? Where do they start? How long a time do they grow? How many plants may come from one parent plant in a single year? Try picking the blossoms

from a few plants as soon as they open, and allow others to bear fruit. Which bear the more and the better runners? How long will a strawberry plant live and produce fruit? Is it wise to let them go unattended for a few years? Why? Experiment on covering the plants in the autumn. Cover them at different times and at different depths—using only small patches for experimental purposes. Likewise experiment in the spring by uncovering them at different times. In setting out young plants, try cutting the old leaves off from some, and leaving others unpruned. Is there any difference in results? Have you heard of fall-bearing strawberries? Nurserymen advertise them under the name "Everbearing." Try a few of these. What peculiar habit makes them fall-bearing? Do they also bear in early Summer? What other plants have a blossom like that of the strawberry? Do they multiply in the same way? Make a collection of flowers (both wild and cultivated) that show close relationship with the strawberry. Do strawberries grow from seed? How do wild strawberries get started in a new field? Try growing cultivated varieties from seed. Try, in some cases, planting the whole fruit. In others, crush and wash out the seeds, and plant them alone. Try this outdoors with no artificial watering. Try it also in the house.

Sometimes the strawberry plants grow well for a longer or shorter time; and then die. What killed them? Dig round the roots and look for the "White Grub"—the larva of the June beetle (June-bug). Put some of these grubs in a box of earth with grass sods, partially bury in the ground, and cover with wire window screen. Leaving them thus outdoors exposes them to natural conditions. Learn what you can about them. Do the same with cutworms, whiteworms, or any other "grubs" found in the ground. Dig a few up in late fall to see in what stage they pass the winter.

Carry on similar experiments and Nature lessons with raspberries, blackberries, gooseberries, currants and all other garden crops. Try to learn the life history of the currant worm and the currant borer. What diseases affect the raspberry? What is their nature? Cause? and control? Collect samples of diseased parts of various plants, and have written essays on some phase of these diseases. Encourage the children

to find out all they can by reading farm papers and bulletins. Do not assign reading, however, unless they have the actual object under observation. Otherwise, they do not know what they are reading about.

NATURE STUDY OF ANIMALS.

H. G. PERRY.

Continue the work started last month in winter birds, and keep adding to your list as you find new species.

Direct special study to such birds as the Blue Jay, Snow Bunting, Canada Jay, English Sparrow, Owls, Partridge, etc.

The lower grades should learn to recognize some of these forms, note their numbers, and become acquainted with some of their life habits, calls, etc. With the higher grades the work should be more advanced. Where does each find shelter? What is the chief winter food of each? Learn to recognize the tracks of our more common species. Every country boy should know tracks of the Partridge, and the marks of the wings in the snow, where it takes flight. These or other known tracks may be used as a basis for comparison. Notice that our larger birds like the hen and the partridge walk, the footprints being of equal distance apart. Compare with the tracks of sparrows. Do sparrows walk or hop? Extend your observation to other birds. Learn to draw the tracks of birds and other animals.

Examine books of Animal Stories, such as those by Thompson Seton and other authors, and note the marginal illustration or ornamentation in the way of tracks of animals, lines of flight of birds, etc., etc. Older pupils, with a taste for nature study, will take the hint, and should be encouraged to attempt some illustrating of their own. Show them how by a few lines they may represent the scenes of their nature study trips, the tracks of animals, location of hills, trees, and brooks, and of many other things of interest. This work will give life to the drawing lesson, and should be correlated with it, or taken in place of home exercises.

Some interesting lessons can be given on the different kinds of feet of birds; their various forms, and adaptations. Take for example the feet of the hen. Note that the long strong toes

and claws are well adapted for running and scratching. The hen may be called a ground bird, and in common with others of like habits, usually has strong feet fitted for running or scratching.

How many toes has the hen? The first toe, which corresponds to the big toe in man, projects backward; the second is the innermost of the three projecting forward; the third and fourth follow in order. How many phalanges has each toe? Compare the arrangement of the toes with the arrangement in man.

Compare the feet of the hen with those of the turkey, partridge, duck and goose. Which of these birds are runners? The duck and goose are more at home in the water, so it is hardly fair to compare them too closely with ground birds. Note the number of toes in each. Which birds have skin stretched between the toes, and between which toes? For what are these webbed feet especially adapted? Note that the position of the legs of the duck and goose is favorable for aquatic life. As they are inserted far apart on the sides of the body they may be likened to paddles, and being well towards the posterior end they act like a propeller. This is a good arrangement for swimming but very poor for running or walking. Among other types of feet may be mentioned the strong feet with long sharp claws of birds of prey; the feet of woodpeckers for clinging to the bark of trees; the feet of perching birds for grasping a twig or perch; and the small weak feet of aerial birds, e. g. those of swallow.

In a similar way lessons may be given on the wings of birds.

Ground birds are at best poor fliers. The hen, being derived from progenitors of this general group, has through domestication become a ground bird in the strict sense of the term. She now uses her wings only as an aid in running. The turkey is but little better off in this respect.

Direct your pupils in the study of the ostrich. Note its small wings, and how they are used in running, and also its conspicuously modified wing and tail feathers. What form do these feathers take in the other birds we have studied? In the wild state, their speed is remarkable, reaching sixty miles per hour, and their single strides may measure more than twenty-five feet."

Compare the ostrich with the emu of Australia, and the rhea of South America. Among other birds with small wings may be mentioned the Penguins of the Antarctic regions. And in New Zealand we find the wingless Apteryx.

The ostrich is valued for its beautiful plumes. In South Africa, ostrich farming is an industry of considerable value. In 1904 there were over three hundred and fifty thousand tame ostriches, which yielded an annual income per head of about eighteen dollars. Ostrich farming is now successfully carried on in California, Arizona, Arkansas, North Carolina and Florida.

The bills or beaks of birds may be dealt with in a similar manner. Even our native birds supply a great variety of form and adaptation, ranging from the long slender needle shaped bill of the humming bird to the large strong hooked beak of the eagle. Illustrations of all the forms are found in good bird books. Among the many nice adaptations of nature we find the woodpecker's bill fitted to chisel into the solid wood, the crossbill's to tear the tough scales from the spruce cone, the humming bird's to suck nectar from the flower, and the hawk's to rend its prey. Look for other equally striking adaptations.

The eyes of birds deserve something more than a passing notice. Note their position on the sides of the head. How many colors are there in the hen's eye? Describe the pupil and the iris. Do hens wink as we do? Watch for the film lid, mentioned in last REVIEW. From which corner does it come?

Explain why the bird turns its head to one side when looking at an object. Can it see objects directly in front of it, and with both eyes at the same time? How does its power of sight compare with your own? Have you noticed hens or turkeys sighting a hawk or eagle? How are they warned? How do they protect themselves? You have noticed that the presence of a sparrow hawk in the grove quiets every song. Why?

There is a sharp keen struggle for existence among animals, and the fittest (not necessarily the strongest) survive. The more advanced pupils, in High School grades, should be told something about that struggle, and Darwin's estimate of its importance as a factor in evolution.

These lessons on birds should not be closed without some reference to poultry raising as a branch of farm industry. As a teacher, study the subject, and direct your pupils to books, especially to Dominion and Provincial reports on Agriculture. The Dominion Experimental Farm's Report annually devotes a section to the Poultry Manager's Report. It often contains valuable information, and should be carefully read. Send for such reports, if not already to hand, to the Department of Agriculture, Ottawa, and to the Departments of Agriculture of the various Provincial Governments at their respective capitals. Ask for special bulletins on the subject, as they are published from time to time.

Follow up this work by helping your advanced pupils to prepare a statement of the initial cost, and the yearly keep of a flock of twenty-five hens, along with a counter statement of the returns from the same. Find the profit or loss on this transaction. Before leaving this work make it your business to show how poultry can be made to yield a good profit. This gives a good exercise in bookkeeping, and stimulates activity in home and school.

While preparing your bird lists, and looking for bird tracks, be on the watch for evidence of fur-bearing animals. Start lists for the different kinds in your district. The lists of advanced pupils should be for your province. Nature study of fur-bearing animals will be taken up in the February REVIEW.

Her Majesty the Queen has been graciously pleased to accept a copy of "Canada and Newfoundland," seven lectures prepared for the Visual Instruction Committee H. M. Colonial Office, by A. J. Sargent, M.A., and published by Messrs. George Philip & Son. Ltd., 32 Fleet Street, London.

These lectures were noticed in the REVIEW for September, 1913.

Time is the most important thing in human life —
For what is joy after its departure?— and thd most
And smiles an angel, or a fury frowns.

— Edward Young

Life is short and we have never too much time for
gladdening the hearts of those who are travelling the
dark journey with us. — Amiel's Journal.

CENTENNIAL ANNIVERSARIES OF THE WAR OF 1812.

J. VROOM.

XVIII.—The End of the Montreal Expedition.

February 11.—When General Wilkinson, having brought his army of ten thousand men with in three days' journey of Montreal, stopped them at St. Regis because Hampton's army of four thousand more was not there to meet them, he announced that the attack on Montreal was suspended, but not abandoned. His intention was to wait there through the winter, and go forward in the spring.

He therefore went into winter quarters at Salmon River. But sickness and hunger, deaths and desertions, had so weakened his army before the winter was half over that he received orders to break up the encampment; and preparations for this movement were begun on the third of February, 1814. The boats, more than three hundred of them, were burned and sunk; the wooden sheds in which the men were housed were given to the flames; everything else of value which they did not intend to take with them was thrown into the river or burned. Two thousand of the men were sent back to Sackett's Harbour under General Brown; and the remainder, under Wilkinson himself, now reduced to about six thousand, broke camp on the eleventh of February and followed along the line of Hampton's retreat to Plattsburg. There the union with Hampton's army was at last accomplished. A body of British regulars and Canadians, having crossed the St. Lawrence on the ice, followed Wilkinson's retreat, and captured some of his sledges loaded with the stores and provisions. This foray seems to have been quite unexpected, for it met with no resistance. Wilkinson had provided no rear guard for his supplies.

The people of Montreal had looked forward with dread to the coming of that army in the spring. They learned with relief that it had melted before the melting of the snows.

An subscriber in New Brunswick writes: "I shall be very glad to have the paper this year, as I really do not know how I should get on without some of the hints and advice I find in its columns."

USEFUL BOOKS.

[STUDIES IN THE TEACHING OF HISTORY: By M. W. Keatinge, M. A., Reader in Education in the University of Oxford, London. Adam & Charles Black, 1910. The Mac-Millan Company of Canada, Toronto. 232 pages, 4s. 6d.]

We so often find theories on teaching a subject dealt with authoritatively by men who are experts in that subject, but have no knowledge of teaching, that it is with a sigh of relief that we read the following footnote to one of Mr. Keatinge's pages:

"It may surprise those who have never taught, to hear that a boy, and by no means an exceptionally stupid boy, may fail after the summer holidays to remember not merely the details, but even the outline of the work done in a school study during the previous year."

"Ah!" we say, "here is no mere theorist, but some one who knows what teaching is, and who has been used to no ideal pupils, but to the every day boy or girl whom we ourselves have to teach," and we set ourselves with more confidence to read what he has to say on the teaching of history.

Mr. Keatinge does not ignore the objections that have been made to the value of history as a school subject: that history is of no use as "a means of education;" that it does not exercise the observation nor train the thinking powers of the student; that "it tends to become vague, desultory or didactic." Nor does he say that it is an easy matter to find and to use methods that will put history on a level as an educational subject, with mathematics or natural science. He speaks of "the well justified feeling that a subject in which the work has to be done for the boy by the teacher, which in the long run resolves itself into either listening to interesting matter or learning by heart; which is, in short, a soft option, is unsuited to be a main study for boys of a certain age."

"It is, however," he goes on to say, at the end of his opening chapter, "by no means certain that history is of this nature or need be taught in this way, and it is clear that if the subject is of first rate importance, the problem of method deserves serious attention. It is in the belief that for purposes of culture no other subject can approach history that the following pages have been written."

As to the value of the subject, the writer prizes history as "an introduction to the world of human nature."

"By bringing the learner into contact with civilizations and societies unlike his own it lessens race and class prejudice. In its chronological aspect it introduces us to the gradual development of civilization in time. In all these and in other directions the value of history is difficult to overrate, and impossible to express in a few words." Comparing it

with natural science "we are told that science trains to observation and to inference as does no other subject. But it is notorious that men who observe well in one field, and who draw sound inferences from their observations, may be unobservant and unsound of judgment in another. * * The attention paid to a formal training in science is no excuse for neglecting to give a similar training on the side of humanity."

The question, Mr. Keatinge says, is this: "How can history be made into a real training school for the mind?" and this question he goes on to answer by a number of definite directions, freely illustrated by material from his own class teaching. He deals fully with the use of "Documents," and it is this part of the book that we feel will be of the greatest use to our teachers. Extracts from "original sources" have been made so accessible by the issue of many cheap editions for school use, that no teacher can be at a loss where to turn for them. Many teachers, we are sure, would gladly make use of them, if they knew how to do it in a really practical way. And such a way is admirably set forth in the chapters on "Documents and Method" and "Documents as Atmosphere."

For instance, to a class studying the reign of Richard II, an extract is given from Froissart's account of the Peasants' Revolt, and they are required to write down everything that the extract tells them about the author:—

"The points that a boy may reasonably be expected to get hold of are the following:—

1. The writer was contemporary.
2. He seems acquainted both with England and other countries.
3. He appears to know the situation in England very well.
4. He seems to be on the side of the upper classes.
5. But it at the same time sympathetic with the rebels.

Each statement is supported by a phrase or sentence quoted from the extract. A number of such exercises, varying in difficulty, are given, and many teachers who do not use them with a class will find them of immense help in their own study and preparation.

A very useful chapter is that on "Concrete Illustration," from which we quote,

"For young boys legislation and religious changes tend to be the most stubborn of abstractions. And yet there is nothing abstract or intangible about legislation for those who are brought into contact with it. An increase in the income tax is not in the least abstract to the boy who is told that for him and his brothers it means a fortnight less at the seaside. For the boy the concrete is the small human detail, and if we can show in this detail the effect that legislation

had upon the lives of human beings, its abstract appearance vanishes at once."

The suggestions offered on note taking, study of dates, and genealogical tables should be most helpful, as they are given in detail and with practical illustrations.

Mr. Keatinge deals also with the planning of a history syllabus, the examination system, and the use of poetry in history teachings. Where all is of such practical value, and written in a clear and forcible style, enlivened by quiet humour, the temptation to quote is irresistible, but we have room for only one more extract:

"The small boy is in the epic stage. Slight gradations of conduct are not for him. The good characters are good and the bad characters bad. Rebellions, crusades and battles give the movement, glorious victories the floor.

A boy will read Marryat's novels without noticing the moralising, he will read Henty without remarking that much of it is as dull as his history text book, and the more complex elements in history, if placed before him are simply neglected. Therefore, whether we wish it or not, the idealistic stage will always precede the critical, and up to a certain point it is wise to assist nature. Elizabeth must be good Queen Bess before the boy learns that she could swear like a fish-wife, and lie like a horse-dealer. Wolsey must be the magnificent prelate and promoter of learning before he is displaced as having the soul of a flunkey.

We have quoted to but little purpose if we have not made our readers want to have the book in their own hands. We strongly recommend it to all teachers of history who want to make the subject at once interesting and "a real training-school for the mind."

A FABLE.

A class teacher whose pupils did not pass the term examinations to any great extent complained to the principal that under the examination system, education was reduced to cramming and lost all its breadth.

"Did you know," he asked, "that there is more gold in the water of the ocean than in all the world beside?"

"Yes," she said, she never owned up there was anything she did not know.

"Which do you think would be better to pay your board with," he asked, "all the water in the ocean or a five-dollar gold-piece?"

"A five-dollar gold-piece," she replied.

"Well," he said, "it is just the same with knowledge; it doesn't make any difference how much there is of it if you can't get at it."

This fable does not teach much of anything. Those that are smart enough to learn anything from it know it already.—Bardeen.

SUGGESTIONS FOR COMPOSITION.

The Three Sieves.

Little Kate cried to her mother one day that she had heard such a tale about Jane Brown and that she had not thought Jane could be so naughty, but that Jane had actually —

Her mother said that before Kate went on with her story, they had better see it if would pass through the three sieves.

Kate asked her mother what that meant.

Her mother said she would explain it, and asked Kate if she knew the story to be *true*. Kate replied that she thought it was, because a great friend of Jane's had told it to her.

Her mother then asked if she thought the story was *kind*, and Kate replied that she was afraid it was not very kind, because she would not like Jane to speak so of her.

Lastly, Kate's mother asked if there was any *need* to repeat the story, and Kate said that, of course, there was no need to mention it at all.

Then her mother said that in that case she had better put a bridle on her tongue and not speak of it, because it was better not to speak of her friends at all than to speak ill of them.

Write the story on the board, dictate it, or, best of all, distribute hectographed copies. Have the first paragraph written on the board at the pupils' dictation, in direct discourse, something like this:—

"O, Mother," cried little Kate one day, "I have heard such a tale about Jane Brown. I never thought Jane could be so naughty. But, do you know, Mother, she really —"

Let the pupils, in turn, express each paragraph orally, in direct speech. Encourage them to use different words of *saying*, in the connecting phrases, e. g., "*cried* Kate;" "*her mother went on*;" "*the little girl answered*." Some speeches may be written on the board, and punctuated by the class. If the children find it hard to grasp the difference between direct and indirect quotation, let two of the quicker ones take the parts of Kate and her mother, and read the story as a dialogue, the teacher supplying the connecting words.

For written work, the whole story, or parts of it, may be written out in direct speech. This gives excellent practice in punctuation, spacing,

and changing the tenses of verbs. It may be varied in many ways. Take a conversation from any story book, write it in indirect discourse and give it to the pupils to turn back again. Ask them to select bits of conversation from books they are reading at home, copy them exactly, to get correct spacing and punctuation, then write them from dictation. Turn reported sayings in the history lesson from indirect to direct speech, or *vice versa*. Encourage the use of direct discourse, where it is fitting, in all language work, and in written answers to questions in history or literature.

Indirect Description.

An interesting phase of composition work which may be taken up in the primary grades as well as in the grammar school, is indirect description. It may also be called "description by hints" or "description by giving the effect for the cause."

Thus, the teacher may ask the class to tell her that the wind is blowing without using the word wind. The result will be examples of effect for the cause. "Hear the windows rattling." "The dust is flying." "The shadows of the trees are waving on the ground."

Other thoughts which may be expressed indirectly are: The sun shines; It is summer; It is winter; It is spring; You are sleepy; It is Sunday; John is happy; The boy is in a jolly mood; He is charitable.

The "weather" is a particularly good topic for use in this work. It can be indicated by talking about the sky, the ground, or the air, or the effects of any of these upon plants, animals and people.—The Teacher.

The work suggested may be correlated with literature in a very interesting way by finding "indirect descriptions" especially in poetry, and showing what they denote. *e. g.*, "Now the sun has stretched out all the hills." "My breath to heav'n like vapour goes."

One of our new subscribers who has gone West writes: "I find the REVIEW very interesting. It seems to be a tie between the East and the West. The article on 'The Diverting History of John Gilpin' in a recent issue, brought up many pleasant memories of a year at St. John High School."

GEOGRAPHY IN NEW BRUNSWICK SCHOOLS

[A paper read by Miss Anna L. Richardson at the Charlotte County Teachers' Institute at St. George, October 2, 1913].

From the derivation of the word Geography, we find it to mean a writing about the earth. Until recently it was viewed and taught as a subject of school study, with this definition as its ideal. The earth was studied for itself alone. Isolated facts were emphasized for themselves, not as vital parts of a living, organized whole; and so physical features, countries, cities and industries were located without any relation to each other. Modern educational thought has broadened this view. We now define Geography as the Study of the Earth as the Home of Man. Yet much of geography still proceeds upon lines of the old ideal, and relationship between the earth and man is wholly overlooked.

From its nature Geography is a conglomerate, not a simple science. It is made up of Astronomy, Botany, Geology, Meteorology, Mineralogy, History, (including civics), Mathematics and Physics. It touches upon all these subjects, not for the scientific knowledge of each as such, but because it depends upon and is related to each. For this reason we must be careful not to overload our geography teaching with the details of these sciences; but to correlate them sufficiently for a true understanding of our subject.

Geography is indeed one of the most important subjects upon the common school curriculum of to-day. It has both a practical and a cultural value, and should be taught that these two ends may be attained. To do this properly we must develop geographical reasoning, which is reasoning from effect to cause; and therefore our geographical data must be organized in a causal series. To illustrate what I mean by this:—A country has resources. These resources determine the occupations of the people. These occupations or industries have products which must be distributed; hence we have commerce; centres of commerce grow into large cities which are necessary to feed and clothe the people. All these, with the characteristics of the people, give rise to form and grades of social development, such as schools, religion, books, wages, standards of living, railroads, telegraph systems and government. Surely this is a sufficiently practical view to make Geography company with Arithmetic.

On its cultural side, it is necessary to that vague, but most desirable mental accomplishment we call general intelligence. One cannot read a newspaper intelligently without a very considerable knowledge of elementary geography, some knowledge of the nations of the world, their characteristics, customs and occupations and the races to which they belong; some knowledge of the earth's physical features, rain and heat belts, climate; enough of astronomical geography to explain in a slight degree the seasons, day and night, etc.—such knowledge must be part of the equipment of the intelligent mind.

To secure this knowledge for our pupils, we need maps, good text-books, supplementary material, a well-graded and definite course of instruction, and time to develop the work without "cram."

It was suggested that we should consider the work of Grades VI., VII. and VIII. But because I wish to enlist the interest of all grade teachers, I shall glance back to the work of Grade II.

GRADE II. Directions and Distances are the chief topics laid down for this year. While interest in these topics is slight at this age, these space relations are so fundamental that efforts must be made to arouse interest. Require the children to point out directions and estimate distances of known objects and places with reference to the school and home. To do this, accurate ideas of the units of length—the inch, the foot and the yard—must be developed. The cardinal points are fixed. How long does it take to walk a mile? Where will you be if you walk a mile north, south, east or west of the school-house? Walk from one street to another. How many steps do you take? Measure the length of step. What is the distance walked in inches? in feet? in yards?

I would have a map of the world in every school-room, even in the Primary School, and by using pictures of places develop the idea that the map is a picture of the World. If places are mentioned in lessons, show their place upon the map with reference to home at least. In Grade III. we talk map and draw plans of the school room, grounds and surroundings, neighborhood, and country. At the same time notice home resources, industries and nearby places in a simple way.

In Grade IV. the teaching will be more formal, and in the work of this year the globe, sand table, pictures and maps will be used to develop ideas of form studied. Excursions should also be taken to see any illustrations in the vicinity. After the idea is in the child's mind I would require a definition of each form to be learned that will do for all the higher grade work, and need only a review there. The following are the topics thus taken up: Form and Size of the Earth, World Ridges, Continents, Mountains, Volcanoes, Valleys, Plains, Rivers, River Systems, River Basins and Divides.

And now for the study of New Brunswick. I would have its study completed in Grade IV. and not laid down again to be taught in Grade V., as is now the case.

In Grade V. I think too little work is laid down in our New Brunswick Course, and too much for Grade VI. So I shall try to sketch what has been done in these years—in Grade V.: Latitude and Longitude, Cause of Day and Night are taught. Next the study of North America as a whole; then the Dominion of Canada, Nova Scotia and Prince Edward Island.

(To be Continued.)

Europe has tried various ways of keeping the peace. Popes, councils, ecclesiastical and lay, concerts, etc., but nothing has been found as a preventive of war but the absence of a desire to fight, and that must be reached through the hearts of men.—School World.

Keep close to duty—never mind the future—Be what you ought to be; the rest is God's affair.—Amiel's Journal.

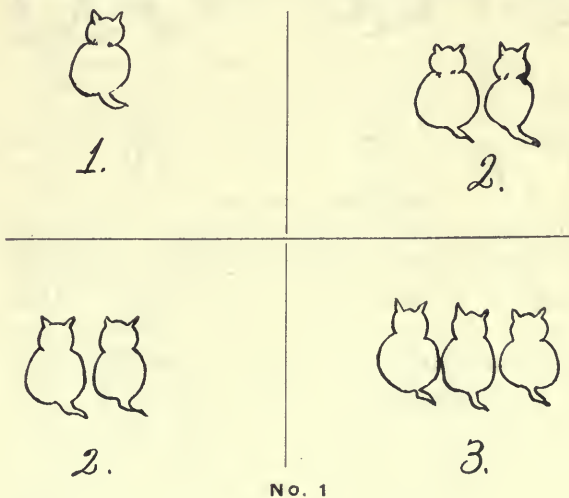
BUSY NUMBER WORK.

GERTRUDE COUGHLIN.

Make or have made an unlimited supply of number cards. The making of these cards will provide busy work for grades two and three. There are many reasons why these cards should be used:

1. Board work is hard upon the eyes.
2. It is difficult for a small child to keep the place.
3. When the child has the work beside her, she is much more apt to get the work in correct order, and right side up.

Manilla cardboard makes excellent cards. A good size is $3\frac{1}{2} \times 5$ inches. One side of the cards is divided into four sections; in each section is placed a group of not more than five



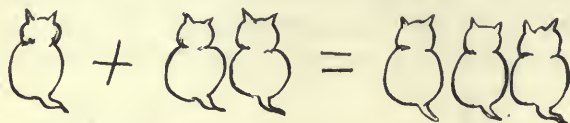
pictures, that is to say there may be two pictures in one section, in another three, in another five; not more than five until the child has mastered these five and learned the different combinations of them. It will take six or eight weeks to do this. The pictures should be the simplest outlines of common objects, apples, hats, chairs, etc. Our illustration shows cats.

When the cards have been distributed, have the groups copied from the cards. When the names of the figures have been learned, have the figure placed near the group that contains that number of pictures. In teaching the names of the figures I have used the figures from out-of-date calendars; the larger sized numbers are especially good. Paste the whole sheet on thick brown paper. Pupils of Grade II will enjoy cutting these up. From 1-10 reserve for Grade I

work. Grade II will use the others in building the multiplication tables, when each one has been given a set from 1-12, and the smaller numbers necessary.

Use the numbers with the number cards. Place the number on the group it numbers. When a pupil can place the number on the correct group, he will pick out the number from the board, and will soon learn to form when he is taught to trace the figure.

Illustration 2. On the reverse side of the card will be found picture combinations involving addition and equality. Proceed with the combination as with the numbers. Copy combination pictures first from these with pegs, tooth-



$$1 + 2 = 3$$

REVERSE OF NO. 1

picks, beads, acorn, pith obtained from dried corn stalks. The signs of plus and equality are formed with the colored tooth-picks. Afterwards use the numbers from calendars, and lastly substitute the figures. The important part to remember is this, that while the plan and arrangement of the entire set of cards are the same, no two of them are alike, the picture on each differing from the others. This provides the necessary variety to allow of their frequent and continued use.

After the child has become familiar with making these groups and combinations introduce a "Jacky Horner Pie." Have each child bring an empty shoe box. Fill three quarters full with clean saw-dust. Any one of the boys will get it for you. In the sawdust place cards bearing a combination from which the answer has been purposely omitted. To guard against the saw-dust being spilled over the desk, have a child place a newspaper on each desk, but I think if you tell the children it will spoil the pie to spill the filling, they will be careful. The idea is to put in your thumb and pull out a plum. The plum is the card. It reads $3+2=$ they copy and supply the answer, 5. When they can supply these readily, next busy work will be from the board.

Now we are ready for new numbers. Introduce only one new group at a time. Conquer six before introducing seven and progress will be more rapid than if more than one were given. Teach six through number cards as the other numbers were taught. Combinations in subtraction, multiplication and division may be taught through these cards after addition has been mastered, but try teaching subtraction right through as you taught addition. My reason for doing this is to accustom the child to the term addition before he gets subtraction, and subtraction before he gets multiplication; there is less danger of his becoming muddled.

Following the pie idea, you may introduce a post-office. The cards are post-cards. Answer each card by completing the combination. Again, place cards on desk, number side down. Draw any one — copy on slate with answer and drop into box. At Christmas time have four or five done up in packages. These are presents. Open, copy, and get answers. Your imagination will furnish numberless schemes. These schemes may be used with profit in Grade II number work.

Another device I've used in Grade 2. When teaching a multiplication table, write a list of figures on the board. Have the children multiply each number by 9, or 5 or 7, depending on the table that has been taught. This works well, when the child has three or more tables to work from.

CALENDAR SONG.

Sixty seconds make a minute
 Something sure you can learn in it;
 Sixty minutes make an hour,
 Work with all your might and power.
 Twenty-four hours make a day,
 Time enough for work and play;
 Seven days a week will make
 You will learn if pains you take.

Fifty-two weeks make a year
 Now we have a new one here.
 Twelve long months a year will make,
 Say them now without mistake.
 Thirty days hath gay September
 April, June and cold November;
 All the rest have thirty-one;
 February stands alone.

TEACHERS' INSTITUTES.

The Teachers' Institute for St. John City and County held its opening session in the St. John High School on Thursday morning, December 18. The President, Inspector W. M. McLean, in his opening address touched on several important subjects that are much discussed at the present time, among them, technical training, the school as a social centre, the introduction of kindergartens, manual training, domestic science and nature study in the rural schools. He gave some practical suggestions for better teaching of history and civics, and especially pleaded for more interest in Canadian history, for a clear presentation of our system of government, beginning with the government of the district and going on to the government of the empire. Speaking of different new movements in education, particularly of the use of school buildings as social centres, he deprecated the placing of heavier burdens on the teachers. Practical teachers of experience, he said, should be consulted in regard to educational reforms.

Mr. M. D. Brown, Principal of Dufferin School, gave a practical and interesting talk on Writing. This address was full of valuable instruction and drew forth a good discussion, in which Principal Nelson, Mrs. Lawrence, Miss Doherty, and others took part.

On Thursday afternoon Dr. Carter, Chief Superintendent of Education, speaking of educational matters in New Brunswick, said that the position of the provinces as regards illiteracy was unfairly stated in the Dominion Government statistics. These figures give New Brunswick the highest percentage of illiterates, and Dr. Carter showed that while the figures were correct, the statement was misleading. "The key to the whole matter," said the Chief Superintendent, "is that while in New Brunswick children begin school at the age of six, in all the other provinces they enter at the age of five. So children under six in New Brunswick would be classified as illiterates." He stated that the percentage of children attending in Grade VIII of the New Brunswick schools was as great as in any of the other provinces.

Miss Jessie Milligan read a paper on Composition in the Primary Grades. She advised the telling of stories to children, and suggested that the children should study pictures and be taught to tell stories from them. Principal W. H. Parlee, in his paper on Advanced Composition, dwelt on the arrangement of sentences, punctuation and paragraphing. Miss Gertrude Webb followed with a paper on Arithmetic, in which she strongly advised that the pupils be made to explain orally every statement made in solving problems. This paper was discussed by W. J. S. Myles, Principal of the High School, and J. Frank Owens, Principal of St. Patrick's School.

Miss Tilley McClelland read an instructive paper on Drawing. She advocated a definite plan of drawing for each school, to take up about twenty minutes every day; drawing from common objects rather than from copies; and the hanging of good pictures in the school room. Dr. Carter commended Miss McClelland's paper, and urged the importance of acquiring a skill in drawing as a foundation for industrial work. Mr. M. D. Brown, Miss Barlow, and Mr. Dykeman took part in the discussion following this paper.

Mr. Fletcher Peacock, Director of Manual Training, spoke in his usual practical and effective way of the importance of a definite system in Manual Training in Primary Grades. Dr. H. S. Bridges, Superintendent of St. John Schools, discussed Mr. Peacock's address.

A very full and most interesting paper on Nature Work was then read by Mr. A. Gordon Leavitt, who developed his subject on many sides, showing its economic, intellectual and aesthetic interests, and supporting his contentions by quotations from many great writers. He showed that love of animals and plants is natural in the young, pleaded for close observation in field and wood, for learning the common names and uses of natural objects, and said that an unselfish love of Nature and recognition of the rights of all created beings should be the outcome of the study.

On Friday afternoon, Director Steeves gave a very full address on the teaching of Agriculture and its importance to the country. Principal S. A. Worrell read an interesting paper on Rewards and Punishments, which was favourably commented on by Dr. Bridges.

Resolutions of regret were passed upon the deaths of Dr. G. U. Hay, late editor of the REVIEW, and Miss Jessie Caird.

The following officers were elected:—President, W. A. Nelson, Principal of Winter Street School; Vice-President, Norman H. Wetmore; Secretary, Miss Ida Keagin; Members of Executive, Miss Jessie Milligan, Miss Gertrude Webb.

In point of attendance and of interest, the Institute was one of the best ever held in St. John. Over two hundred teachers enrolled; the papers and addresses were of a high order and well repaid the close attention they commanded.

The teachers of Carleton and Victoria counties met for their Institute in the Fisher Memorial School Building, Woodstock, on Thursday and Friday, December 18 and 19, with an attendance of one hundred and thirty-seven. Inspector F. B. Meagher presided. Addresses were given by Mr. Fletcher Peacock, Director of Manual Training, and Mr. R. P. Steeves, Director of Elementary Agricultural Education, on their respective subjects. The Trustees and Ratepayers' meeting was a most successful one, well attended and prolonged, with great interest in the subjects under consideration, namely: Agriculture in the Schools, The Government of School Districts, and Consolidated Schools and District Union.

A fine paper by Mr. F. C. Squires on the Educative Value of Mathematics and Latin, given in the advanced section, was most inspiring to teachers of these subjects. In the intermediate section Geography, Civics, and Plant Study were taken up. In the Primary division lessons were given in Arithmetic by Miss Mabel Lister, and in Reading by Miss Clara Carson, and a good paper on Primary Difficulties was read by Miss Greta Gaskin. The lively, informal questioning and discussion drawn forth by these lessons showed that they were appreciated as useful and interesting.

On Thursday evening a pleasant informal reception was held by the teachers in the Assembly Hall.

On Friday morning a very valuable paper on the Teaching of Literature was read by Miss Gaynell S. Long.

This paper has been recommended to the REVIEW for publication. It was followed by a discussion opened by Miss Eleanor Robinson, Editor of the REVIEW, and followed up by Nelson W. Brown and Mr. H. H. Hagerman of the Normal School, and others. Mr. Hagerman's illustrated talk on Drawing was full of instruction and entertainment.

After a discussion on Care and Decoration of School Buildings and Premises in the afternoon, Miss Juliet Jordan read a paper on the Connection between Home and School from the Teacher's Standpoint. The Mother's Standpoint was to have been treated by Mrs. Ena L. Brittain, who was unfortunately unable to be present.

The next session of the Institute will be held in Woodstock in December. The officers elected were: President, Mr. F. C. Squires; Vice-President, Miss Bessie Fraser, Secretary, Mr. F. C. Alexander; Additional members of executive, Miss Helena Mulherrin, Mr. Hanson.

The Institute was considered a very successful one. The glorious weather and the pleasant surroundings in the beautiful rooms of the Fisher Memorial Building contributed no little to the good spirits of those in attendance.

Through the courtesy of the Carleton Sentinel, the members were supplied with prettily printed booklets, showing on one cover the old Grammar School building, in which the first Carleton County Teachers' Institute met in 1878, on the other the present fine building, and containing the programme of the Institute held thirty-five years ago, together with that of the meeting of 1913.

The Teachers' Normal Institute for the six eastern counties of Nova Scotia met at Port Hawkesbury, Inverness County, December 15 to 18. Inspectors MacDonald, Phelan, MacNeil, and McKinnon had the work well organized, and model lessons were taught to common school grades each day. Afternoon sessions were devoted to discussions and the answering of questions. The "Question Box" was well patronized.

About two hundred and eighty teachers attended. The Institute was a success in every particular.

Messrs. Connolly, Benoit and DeWolfe, of the Normal College staff, were present, and took an active part in the work.

At a public meeting on Wednesday evening addresses were given by Dr. A. H. MacKay, Superintendent of Education, L. A. DeWolfe, Director of Rural Science Schools, and by citizens of Hawkesbury and vicinity.

This Institute has discarded the custom of reading long papers on educational topics. The officers believe more good comes from seeing good lessons skillfully taught, and from discussion of the methods illustrated. Observation of such methods convince one that it has much in its favour.

It is necessary to have a corner of the mind always open and free, to leave a place there for the opinions on one's friends and to entertain them as they pass by. It becomes really intolerable to talk to men in whose brains the divisions are filled up and into which nothing from without can enter.—M. Joubert.

SOME GAMES FOR RECESS.

Shadow Tag.

This is a good game for little children on a cold sunny day, when the shadows are distinct.

The player who is It tries to step or jump on to the shadow of some other player. When he succeeds, he calls the name of the owner of the shadow, who then becomes It. The players must keep out in the open, so that their shadows are fairly on the ground, and each one must stand still the instant his name is called.

Trades.

The players are divided into two equal bands. One band decides upon some particular trade or occupation, then advance towards the others, saying:

"Here are some men from Botany Bay.

Got any work to give us today?"

The second party says, "What can you do?" the first answers "Anything." The second says, "Set to work then!" whereupon they go through the motions of the chosen trade, such as planing, hammering, sawing, for a carpenter; cutting and sewing for a dressmaker, and so on. If the second party guess correctly what trade is represented, they take their turn. If they fail, the first band has a second trial.

Blackboard Relay

[This is a good device for enlivening a dull hour in school. It may be adopted for use in spelling, composition, arithmetic, or almost any subject, and for any children old enough to write on the board.]

The class is seated with an even number of pupils in each row. A crayon is given to the player at the back of each row, all of whom at a given signal run to the board and write a word suitable for the beginning of a sentence. After writing, the player returns quickly to his seat, handing his crayon, as he goes, to the player in front of him. This second player at once runs forward, and writes a suitable word after the first. In this way each player adds to the sentence being written by his own row, the last player being required to write a word that will complete the sentence, and to add punctuation marks.

In the game adapted to sentence building, as this is, points should be scored for speed, spelling, writing and grammar; twenty-five for each. The first row finished scores twenty-five for speed, and the others in proportion.

This is an admirable device for testing in reviews of history, geography or arithmetic.—From *Games for School and Home*. Macmillan & Co.

THE SUMMER RURAL SCIENCE SCHOOL FOR NEW BRUNSWICK.

R. P. STEEVES.

The decision has been arrived at to establish at Woodstock a New Brunswick Summer Rural Science School for teachers. The managing committee has been appointed by the Agriculture and Education Departments acting conjointly. The Fisher Vocational School will be the home of the first sessions.

The full course will cover two summer sessions of four weeks each, with an interim winter reading and experimental course. The first session will open on the second Wednesday of July next. Only a limited number of applicants — not more than ninety — can be accepted.

The course will include instruction in (1) Nature Study and school gardening; (2) Botany and birds; (3) farm animals; (4) rural household science; (5) farm carpentry; (6) plant and soil chemistry and physics. Weather, insects, farm book-keeping, and other subjects related to the foregoing, will be arranged in accordance with convenience, to form in all six groups or departments.

Since it is desirable to extend throughout the Province the influence of trained work in agriculture, the number of applicants to be accepted from each county will be determined on the basis of population and the number of schools in operation there. Should the number of applications from any county on a certain date, probably the fifteenth day of May, be below the number allotted to it, applications may be accepted from other counties having the full quota assigned them.

Teachers who attend this Summer School and who satisfactorily pass the sessional examinations, will have their transportation charges (not including sleepers, meals and baggage transfers) allowed them. These will be paid at Woodstock at the close of the session. They will also receive at the end of the first term during which they give in their schools satisfactory instruction in Agriculture with School Gardening, a further sum of twenty dollars. This is to aid in paying expenses while in Woodstock.

Both trustees and teachers of schools in which Agricultural Instruction with School Gardening is given, shall receive the statutory grants

provided for in the "Schools Act" and in accordance with the regulations thereunder.

The need for trained men and women along practical lines of education is coming into prominence in this Province. Positions are calling for capable teachers with special training and qualifications. It is hoped that our young men especially will seize upon this opportunity to obtain the power to aid in developing the resources of their country and at the same time increase their earning capacity.

A calendar with instructions as to the various features of the course, the syllabus of studies, requirements of applicants, and other matters connected with the school is being prepared, and will be ready for distribution in a few weeks. It may then be had on application to the Director of Elementary Agricultural Education, Susses, N. B.

We all know that King John did not sign Magna Charta, but instead caused his seal to be attached to it, and ever since his time the affixing of the great seal has been the necessary formality for the execution of certain Government functions. It is therefore necessary that this seal and its guardian, the Lord Chancellor, should always remain in the country, and it is said that Cardinal Wolsey was until this year the only Lord Chancellor who has gone abroad during his tenure of the office. It will also be remembered, and it serves as an illustration of the importance of the instrument, that when James II of England fled the country on the approach to Westminster of William of Orange, he thought to disarrange public affairs for his rival by dropping the great seal into the Thames. That act did not hinder the change of dynasty which we call "the Revolution," any more than the other legal formalities ignored in the winter of 1688-9, and now that Lord Haldane has paid a semi-public visit to the United States of America the seal was put, during his absence, "into commission," i. e., into the custody of three statesmen who used it whenever required until Lord Haldane returned.—*School World*.

The best thing education can do is to make moral character efficient through mental discipline.—L. B. Briggs.

PRIMARY POETRY.

Is the Moon Tired?

Is the moon tired? She looks so pale
 Within her misty veil;
 She scales the sky from East to West,
 And takes no rest.

Before the coming of the night
 The moon shows papery white;
 Before the dawning of the day
 She fades away.

— Christina Rossetti.

The Moon.

Lady Moon, Lady Moon, where are you roving?
Over the sea.

Lady Moon, Lady Moon, whom are you loving?
All that love me.

Are you not tired with rolling, and never
 Resting to sleep?
 Why look so pale, and so sad, as for ever
 Wishing to weep?

Ask me not this, little child, if you love me!
You are too bold;
I must obey my dear Father above me,
And do as I'm told.

Lady Moon, Lady Moon, where are you roving?
Over the sea.

Lady Moon, Lady Moon, whom are you loving?
All that love me.

—Lord Houghton.

Before reading the poems to the children have a little talk with them about the moon. Encourage them to tell where and when they have seen it and what it looked like.

These poems are both suited for concert recitation. Try to get the children to speak distinctly, but softly. They are very apt to shout, strain their voices, and produce a harsh unpleasant sound. Be sure that they do not get a false start with the metre, especially in the phrase "Lady Moon, Lady Moon." "If left to themselves, they will stress the first syllable, "La," and slur the others. Tell them to *call* Lady Moon, very gently, twice over. Let them practice the phrases "Never resting to sleep," "forever wishing to weep" before they say the whole verse. In the second poem one child may take the part of the moon, and speak the italicised lines, or the class may be divided into two

divisions, one to question, and one to answer. Be careful not to let the poetry lesson run into a lesson on astronomy, or into a sermon. The aims should be. (1.) To let the children learn the words and feel the beauty of them. (2.) To let them see the pictures that the poems show us, and compare with the way they themselves see the moon. Above all, get them to say the lines as gently and sweetly as they possibly can. Read the first poem through twice. Who has seen the moon look like this? What is the misty veil? What does "scales" mean? Did you ever hear of "scaling ladders?" When does the moon show "papery white?" Why? What colour is she at night? When and why does she fade away? Did you ever see a lamp or a candle lighted in the day time? How does it look?

After Miss Rossetti's poem is learned, take up the second one.

In this poem the child asks the Moon herself if she is tired. Read it through twice. What do both these poems say about the moon? That she never rests, and that she is pale. Here is another verse that says,

"The moving moon went up the sky, But nowhere did abide." What does "abide" mean? Whom does the moon obey? What work does God give her to do? Say after me. "God made two great lights; the greater light to rule the day, and the lesser light to rule the night." Does the moon always look pale and sad? Some people do not think so. Listen to this.

"The moon doth with delight look round her when the heavens are bare," and

"The moon, like a flower
 In heaven's high bower
 With silent delight
 Sits and smiles on the night."

Learn these verses too, and when next you look at the moon, I wonder which verse will come into your mind.

"Much of the good work in the world has been that of dull men who have done their best. Moderate intelligence with devotion behind it, and with constant exercises in the right direction has produced some of the most valuable among men and women"—L. B. Briggs.

CURRENT EVENTS.

The British cruiser *Tiger*, recently launched in Scotland, is the swiftest vessel afloat.

A company has been formed in Quebec to promote winter navigation on the lower St. Lawrence. It is said that the ice is always moving, and offers open passages to allow small steamers to pass.

A new railway across Canada is proposed. It is part of the line called the All-Red route, which is to circle the earth in the British Empire. The proposed railway is to run from near St. Charles, on the Atlantic coast, to Dean's Channel, on the Pacific, keeping farther north than the other transcontinental lines.

The calosoma, a large and handsome beetle which has been introduced in New Brunswick and in some parts of New England to prey upon the brown-tail moth and other hurtful insects, is said to be rapidly increasing in Massachusetts, where it will help to check the ravages of the brown-tail and gypsy moths.

The great barrage of the Euphrates, the first part of the irrigation works planned by Sir William Willcocks to restore the fertility of Mesopotamia, was completed and ready for use on the twelfth of December. When the whole work is finished, it is expected to treble the wheat crop of the region.

At a meeting of the North American Fish and Game Association recently held in Ottawa, a resolution was adopted looking to a treaty between Great Britain and the United States for the protection of migratory birds now threatened with extinction.

The death of the Emperor Menelik of Abyssinia is again reported, and this time, probably, it is true, for the announcement is official.

Otto, the mad king of Bavaria, has been deposed, and is succeeded by the Regent Ludwig. The new King's wife is a direct descendant of Mary Queen of Scots; and therefore, according to the Jacobites, to whom the right of succession was independent of the will of parliament, would be the rightful ruler of the British Empire by inheritance. If this is amusing, there is something still more so in the Jacobite doctrine when carried a little farther. It has been seriously said that her son, Prince Rupert of Bavaria, is the lawful King of America; for when King James abdicated the throne of Britain, if he did really give up his claim, he did not give up the throne of America, which, if you please, was an entirely separate kingdom. America, in this case, of course means Virginia, and Prince Rupert himself probably never thought of such a claim.

A rebellion has broken out in Ecuador, and the rebels have captured an important town.

A Spanish ship on the east coast and a Japanese ship on the west coast have been added to the foreign fleets in Mexican waters. All the north part of Mexico is now held by the rebels under Carranza and Nilla, and there are two separate centres of disturbance in the south; yet it is claimed by Huerta that his government is gaining strength every day.

The annexation of Crete to Greece took place on the

fourteenth of December, King Constantine himself hoisting the Greek flag over the fortress of Canea. For many years the Cretans have tried to break away from Turkish rule and join the Kingdom of Greece, but until now the Great Powers of Europe have forbidden it.

A detachment of the Royal Northwest Mounted Police has left Dawson for Herschel Island, in the Arctic Ocean, to gather information about the Stefansson expedition. The largest vessel, the *Karluk*, was fast in the ice when the leader and six other men left her to go on a hunting cruise. A heavy storm arose, and the ship was driven out to sea. Stefansson and his companions on shore are quite safe, and it is hoped that the twenty-five men on the ship are in no great danger.

A French aviator has completed a journey from Paris to Cairo. The most difficult part of his journey was over the Taurus Mountains, where he had to fly at a height of nearly sixteen thousand feet.

The great cableway which is to be built across the mountains that separate Kashmir from the Punjab will be about seventy-five miles in length. The plan of constructing an ordinary railway into Kashmir has been pronounced impracticable because of the loose nature of the soil in the mountain regions, which causes many slides and the falling of huge boulders with every heavy rain. The cables will be upheld by iron towers of lattice work, some of which will be a hundred feet high. It is expected that goods can be carried over the whole distance in fifteen hours; whereas at the present time, by bullock cart, under the most favourable conditions of weather, it requires fifteen days. The longest cableway now in use is one of twenty-two miles, in Argentina.

It is ten years since the first flight of an aeroplane was announced amongst current events. Perhaps nothing better marks the progress made in the improvement of these wonderful machines than the late announcement of the building of one in Russia that is fitted for passenger service by night, and offers sleeping rooms for passengers.

At all railway stations in Russia, books are kept in which passengers are invited to enter any complaints they may wish to make.

Under a new Anglo-Turkish treaty, it is said, Great Britain will obtain a concession of all the oil fields in Arabia and Syria. With the development of the oil-burning engine, and the possibility that oil will soon take the place of coal in the generation of power at sea, the possession of the large oil fields of the world becomes a matter of the greatest importance. There is a revival of the rumour that a British company will get control of the oil supply of Colombia; and there are some who profess to believe that the question of whether a British company or an American company shall have control of the oil wells of Mexico is the real issue in the present civil war in that country.

The government of Holland is seriously taking up the project of draining the Zuyder Zee. Six hundred years ago this little inland sea did not exist. A series of storms in the thirteenth century drove in the waters of the German Ocean upon the shifting sand dunes and low-lying fields around the mouth of the Yssel; and the small lake

which had long existed there widened, and went on increasing, until village after village and town after town was washed away. Now, if the plans of the government are carried out, the submerged fields will again be cultivated land, and the lost towns will be rebuilt. Reclaiming land from the encroachment of the sea is a work that is always going on in Holland. It is calculated that the area thus added to the country since 1830 is no less than four thousand square miles.

It has been generally thought by naturalists that the passenger pigeon is extinct. Now there is reason to believe that after years of seeking a nesting place has at last been found. If so, the best means must be devised of protecting and rearing the young; for farmers would find the wild pigeons valuable as destroyers of insect pests.

SCHOOL AND COLLEGE.

The Albert School of Carleton, St. John, was recently presented with a Union Jack by Mr. G. S. Mayes

The Mount Allison Rhodes Scholarship for 1914 has fallen to Mr. W. H. Irving of the class of 1912. Mr. Irving won four Scholarships while at Mount Allison, and took first class honors in English and Philosophy. Since his graduation he has taught Mathematics, with marked success, in the Moncton High School. The REVIEW congratulates Mr. Irving on his election and Mount Allison on its candidates.

The Rev. A. W. Teed, for many years Rector of Richmond, N. B., has been appointed Bursar of King's College, Windsor, N. S.

The Woman's Canadian Club of St. John has prepared a programme of interesting and instructive lectures, illustrated by slides, to be given free during the winter, in the Assembly Hall of the High School, and the lecture hall of the King Edward School.

Following the example of large cities in other countries, Montreal is to have a course of training for teachers in play-grounds, summer schools, settlements and clubs. The McGill University School of Physical Education, in co-operation with the Montreal Parks and Play-grounds Association, offers a course, leading to a certificate, to fit for such work. The course, open to men and women, begins on January 8, 1913, and includes among other subjects, instruction in Psychology, the practical conduct of play-grounds, games and athletics. The fee for the full course of fifteen weeks is \$12.00, and parts of the course may be taken for an almost nominal fee. Particulars may be had from the Physical Director, Royal Victoria College.

The Alberta Schools of Agriculture are planning to provide special training for boys from the Mother Country who want to farm in Canada, but have no knowledge of farming or of Canadian conditions. The boys will take regular courses during the winter, and in summer will be instructed in principles of agriculture and in the work done on the demonstration farms.

Miss Foote of Calgary, a teacher of seventeen years experience, and a member of the Calgary School Board, has been nominated as chairman of the Board, and her election is considered probable. She is the first woman ever elected to public office in Calgary.

Fredericton, N. B., teachers have presented to their School Board a very strong memorial, signed by many representative citizens, asking for a considerable increase in their salaries, to date from the beginning of the present year. The memorial was presented by Dr. Berton C. Foster. After deliberation the Board decided to refer the matter to a committee and to call a meeting during January at which recommendations should be made.

At the Christmas Entertainment given by the Lunenburg Academy students the sum of \$91.50 was netted for the Academy Library. The large Assembly Hall was filled, and over one hundred people had to be turned away for lack of even standing room.

Miss Faye Elderkin, of Port Greville, who has been teacher of Household Science in the schools of Lunenburg and Bridgewater, is leaving to take the post of assistant teacher in the Household Science School at Sydney. Miss Elderkin is being succeeded in Lunenburg by Miss Eleanor Sugatt, a graduate of the Truro School of Household Science.

The Amherst, N. S., News and Sentinel, a paper that is worthy of imitation in its wide interest in Educational matters, argues strongly in favour of free text books. Among the arguments which it quotes is that in Massachusetts one unforeseen result of the adoption of the free text book system was an immediate increase of ten per cent in High School attendance.

At the annual meeting of the School for the Blind in Halifax, the Superintendent, Dr. Fraser, showed the need of more money to keep the work of the institution up to the standard. There were on December 1st, 1913, 148 blind pupils under instruction, of whom thirty are from New Brunswick, four from Prince Edward Island, sixteen from Newfoundland and the rest from Nova Scotia. The splendid work done by this school should ensure all the support that is needed. At present there is a deficit of over five thousand dollars.

Professor Sexton, principal of the Nova Scotia Technical College, has introduced moving pictures, industrial and educational, into the College course. These will be shown throughout the term on Monday and Tuesday of each week. Professor Sexton is to be congratulated upon his enterprise in using moving pictures as a means of instruction. Their educational value is being widely recognized. The Separate School Board of Hamilton, Ont. are acquiring a set of motion pictures for use in Geography classes, and if this venture proves successful, they propose to use them in teaching other subjects.

At the December meeting of the Board of School Trustees of St. John, delegates from different societies appeared to urge forward movements in the city schools. The Women's Canadian Club appealed for music in the schools and Superintendent Bridges was empowered to make arrangements for regular musical instruction. The Daughters of the Empire and the Free Kindergarten Association united to ask the Board to establish Kindergartens as part of the city school system. The Board was recorded as being in sympathy with the Kindergarten idea, but made no pledges as to action. The Playgrounds Association asked for the use of the High School Assembly Hall on two evenings in the week for the use of working girls. This matter was left with the Superintendent.

The Scholarship of \$25.00 donated to the student of the New Brunswick Normal School making the highest average in the Christmas examinations, by Mr. Weldon B. Shaw of Victoria, B. C. was won by Miss Etha Mills, of Harrisville, Westmorland County.

Miss Freda Brown, who has been teaching at Lord's Cove, Charlotte County, N. B., has resigned, and her place will be taken by Miss Bessie Mallock.

Miss Margaret McLaughlin, teacher at Lambert's Cove, Charlotte County, who left that post at the end of the year, received several handsome gifts from her pupils and friends, showing the regard in which she was held.

Many old Pictou and Dalhousie graduates will be shocked to hear of the tragic death of Charles Budd Robinson, Jr., of the Bureau of Science, Manila, who was killed early in December by the natives of Amboyna Island in the Malay Archipelago. No further particulars of the sad event have yet been received. Dr. Robinson was a native of Pictou, N. S., and graduated from Dalhousie in 1891. After teaching in Kentville and in Pictou Academy until 1897, he spent two years at Cambridge University in the study of botany. He then held the post of Science and Mathematics Master in Pictou Academy for four years. In 1903 he went to New York, and was appointed Curator of the Bronx Park Museum. He took his Ph. D. degree at Columbia University in 1906. In 1908 he went to Manila to work in the botanical department of the Bureau of Science. He was at home in 1911-12, but returned to his work in the Philippines, and on June 17th, 1913, went to make a thorough botanical exploration of the Island of Amboyna. He was forty-one years of age and unmarried.

The Committee on text books for use in New Brunswick Schools met in Fredericton on December 29th. A tentative literature course for High Schools was approved by the Committee and will be submitted to the Board of Education. A committee composed of Mr. R. P. Steeves, Director of Elementary Agricultural Education, and Mr. H. H. Hagerman, of the Provincial Normal School, was appointed to plan and suggest a new science course for grades I-VIII, which shall harmonize with the work in Elementary Agriculture.

The half-yearly Conference of the Chief Superintendent of Education for New Brunswick with the School Inspectors, the Principal of the Normal School, and the Directors of Vocational Education was held in Fredericton on December 30th.

The Executive of the Educational Institute meeting at Fredericton on Tuesday evening, December 30th, was unanimously decided in favour of holding an interprovincial Educational Institute in Halifax on Wednesday, Thursday and Friday, August 26-28, 1914. Mr. G. A. Inch of Fredericton was elected secretary.

The lady teachers of the St. Stephen Schools have received an increase of \$50 in their salaries.

Miss Florence G. Robertson is leaving St. Stephen, N. B., to take work in the Moncton schools. Miss Gertrude Coughlin is to succeed Miss Robertson as assistant to Mr. F. O. Sullivan, and Miss Kathleen M. Simpson of Oak Bay has been appointed to take charge of the school at the Cove, St. Stephen, lately taught by Miss Coughlin.

RECENT BOOKS.

A most attractive reading book for beginners in German is *Gruss aus Deutschland*, written by C. H. Holywarth, Ph.D., Instructor in German at Smith College, for the use of his students, after a vain search for one already in existence to meet his requirements.

Based upon a vocabulary of about 1,000 words of constant use in daily life, the text of this reader is intended to familiarize the beginner with a useful vocabulary, and at the same time to introduce him to German life and customs. It is an interesting description, written in the form of letters, of an American boy's life in Germany during a period of three years.

There is a full vocabulary, good and not too full of notes, and a set of questions and exercises based on the text. The many clear and well chosen illustrations add a great deal to the interest and attractiveness of the book. [190 pages, 90 cents. D. C. Heath & Co., Boston.]

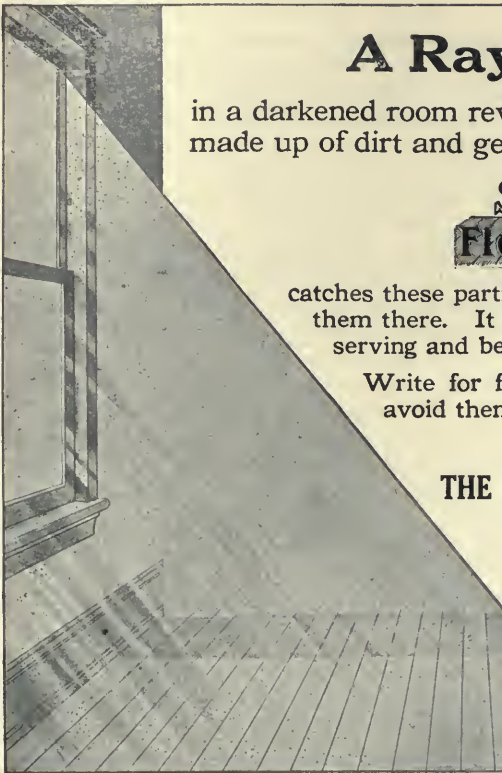
Another of Heath's Modern Language Series recently issued is a somewhat abridged edition of *Das Skelett im Hause*, by Frederick Spielhager. This is a bright, amusing little story, interesting from the very first. It has notes and vocabulary. [217 pages, 45 cents. D. C. Heath & Co., Boston.]

A set of the *Piers Plowman Histories*, Junior Books IV. to VII., would wonderfully enlighten and enliven the path of the teacher of English History in the common schools. Book VI., which deals with "The Nation and Government from Earliest Times to 1485," is as interesting as any story, and interesting, not by dint of omitting dry facts, but by bringing them out of the realm of abstract statement. For instance, the accounts of how Domesday Book was made and how the Great Charter was sealed (not signed!), and how Parliamentary Government began, are so vivid and concrete that even the dull child will feel that they mean something. The illustrations are by no means the least valuable part of the volume. [296 pages, 2s. George Philip & Son, London.]

An Introduction to World History by M. W. Keatinge and N. L. Frazer, can be recommended to our teachers who are using Myers' or Swinton's histories, as a supplementary hand book, on much the same lines as Myers'. The extracts for illustration from the original documents will be useful, as will also the list of references at the end. [280 pages, 2s. Adam & Charles Black, London.]

Selected Readings in English History, by Harriet E. Tuell and Roy W. Hatch, is a collection of illustrative readings, ranging from Tacitus to the present Prime Minister of England. The basis of selection is said to have been "sound historical content, combined with good literary workmanship, and an appeal to youthful imaginations." The selections are not confined to original documents or contemporary writers, but draw also upon modern literature, for instance, Tennyson's "Becket." They seem to be excellently chosen, especially from the point of interest. A very good book for school libraries, or for the teacher's desk. [515 pages, \$1.40. Ginn & Co., Boston.]

From the University Tutorial Press comes a school edition of Caesar's Gallic War, Book VI., edited by L. M. Penn, M.A. It has a full introduction, vocabulary and



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notes, and all the editorial matter deals with the book more as history and literature than as a grammatical exercise. [62 pages, 1s. 6d. University Tutorial Press.]

Pictures of Famous Travel, by H. Clive Barnard, M.A., B.Litt., covers in outline the history of geographical discovery from the days of the sailors from Tyre and Sidon down to Shackleton and Amundsen. We chanced to open it at the picture of "The First Ship to Circumnavigate the World," taken from a collection of voyages, dated 1602. The ship was called the "Victoria," and the Latin verses written above say, "Well am I named the Victory; sails are my wings, glory is my reward, and my battle is with the sea." The book has fifty-eight illustrations, thirty-two of them coloured, taken from various sources. It is well adapted to supplement the work and increase the interest in both history and geography classes. [A. & C. Black, London. 64 pages, 1s. 6d.]

WORLD WIDE.

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NEW ADVERTISEMENTS:—

Rural Science School, (p. 192.)

THE EDUCATIONAL REVIEW is published on the tenth of each month, except July. Subscription price, one dollar a year; single numbers ten cents. Postage is prepaid by the publishers, and subscriptions may begin with any number.

When a change of address is ordered, both the NEW and the OLD address should be given.

If a subscriber wishes the paper to be discontinued at the expiration of the subscription, notice to that effect should be sent. Otherwise it is assumed that a continuance of the subscription is desired. It is important that subscribers attend to this in order that loss and misunderstanding may be avoided.

The number accompanying each address tells to what date the subscription is paid. Thus "319" shows that the subscription is paid to Jan. 1, 1914.

Address all correspondence to

THE EDUCATIONAL REVIEW,
St. John, N. B.

The attention of teachers and students is drawn to the advertisements of the Truro Rural School and of the Summer School of Science which appear this month in our columns.

The Summer School of Science for the Atlantic Provinces has had twenty-seven successful meetings and many teachers stand ready to testify to the profit and pleasure they have gained from it. The strongest of its advantages is the opportunity it offers of seeing and studying

different part of the country. The session this year is to be held in Charlottetown. Those who already know the "Garden of the Gulf," need no urging to visit its pretty capital under such favorable conditions, and those who have never crossed the Straits should not lose such a good opportunity.

The statement made some months ago by the REVIEW that public opinion was coming to the aid of the teachers in asking for higher salaries has been quickly verified. In the city of St. John the salaries have been increased at the following rates: Principals of schools containing ten or more rooms receive an additional \$200. principals of smaller schools, \$150; teachers on the reserve staff, \$50; all other teachers \$100. This increase for grade teachers raises their maximum salary from \$400.00 to \$500.00, exclusive of government grant.

In Fredericton a memorial asking for higher salaries, presented by the Teachers' Association, was supported by a petition signed by two hundred representative citizens, and the school board, after considering this presentation of the case, voted a twenty per cent increase for all teachers of their appointment. This puts the salaries received from the Trustees by grade teachers of Fredericton at \$420.00 each.

St. Stephen, Moncton and Chatham are other towns that have lately shown appreciation of their teachers' work by making substantial additions to their salaries. The principal of the High School in Moncton now receives a salary of \$1,800; the principal of the Fredericton High School, \$1,840, and the principal of the St. John High School, \$2,000.

These facts and figures are encouraging. Teachers in the Maritime Provinces need no longer feel that in the West lies their only hope of obtaining a modest competence. The lead given by the larger communities must soon be followed, and the REVIEW looks forward to report ing further steps in this movement.

HOW THE REVIEW IS PRINTED.

GERALDINE COSTER

Few people realize what marvellous and intricate machinery and what hours of painstaking, accurate work are necessary in printing even a comparatively small publication. A visit to a modern printing office is a revelation of what machinery can do. Through the courtesy of Messrs. Barnes & Co., I had the pleasure of seeing a recent number of the REVIEW being printed, and I was so much impressed by what I saw, that I have attempted to describe it to other readers of the REVIEW.

When we entered the printing rooms, we were taken first to see a machine that looked at first sight like a large typewriter. At this a young girl was sitting apparently typing a manuscript. But a closer inspection revealed a much more complex mechanism than that of the typewriter. Instead of a sheet of paper, a good sized roll of paper about five inches wide was fixed in the machine. This roll was slowly unwinding, and each key that was struck made a small perforation in the paper. The perforated paper looked something like the roll that one puts into a mechanical piano-player or a musical box. Our guide told us that each little hole in the paper represented a letter or figure from the manuscript.

We next went into a small room shut off from the rest, as we suppose on account of the deafening noise of the machine working there. This, unlike the "typewriter," was worked by an electric motor. Into it was fitted one of the perforated rolls. This machine unwound its roll, and as each perforation caught in the tooth to which it belonged, mechanisms were set in motion which dipped out a little molten lead from a small trough, and forced it into a mould, from which it emerged a perfectly formed tiny piece of type stamped with the required letter. This letter slid along a slot into its place beside the previous letter. When a line was completed, it slid out automatically and took its place close above the previous line of type in a long strip, just the width and about twice as long as a column of the REVIEW. Our guide told us that if by some mistake a line was too long or too short, the whole great machine stopped of itself, and thus called the operator's attention to the error!

The columns of type are next taken to a proofing press. Here they are automatically smeared with printer's ink, and by means of a large revolving roller, a piece of paper is pressed down on the wet type, making an impression which is given to the proof-reader, who corrects it much as a teacher corrects an exercise, placing certain marks in the margin to show a spelling mistake or faulty punctuation. These corrected sheets go to a type-setter, along with the columns of type from which they were printed. The type-setter follows along the corrected proof, and picking out the wrong letters or signs in the type, puts in the correct ones which he picks from various little boxes beside him. The columns of type are then passed on to a "make-up" man, who arranges it into pages the form and size of the REVIEW. Then another impression is taken, and sent to the author for final corrections. When these final corrections are made the pages are placed on an iron table called a "stone," and locked solidly in a steel frame called a "chase." This "form," as it is called after being fastened in the chase, is then taken to the press, when the actual printing is done. Usually eight or sixteen pages are printed at one impression.

When the whole magazine is finished and mailed, what becomes of all that beautiful new type that the machine made? It is unceremoniously dumped into the melting pot, poured off into miniature "pigs" of about two by three inches, and then used again for the next issue.

I have not spoken of the advertisements, which because of the many different kinds and sizes of type required, are set up by hand, nor yet of the folding, binding, trimming, and other small but important processes in the making of a magazine. Space forbids a detailed description of these, but they are all interesting to watch, and to have seen them is to feel a new interest and pleasure in all the magazines and books of which our modern life is so full.

The REVIEW has received many compliments upon its improved appearance. One subscriber in Nova Scotia writes, "I liked the new dress in which the REVIEW appeared in January. I know the Partridge Berry well, and the day the paper arrived I had been out in the woods and gathered a large bunch of the berries and vines."

WINTER PLANS FOR SUMMER GARDENS.

L. A. DEWOLFE.

Nothing appeals to one more than photographs. Try, therefore, to have photographs of some bare back yard in Spring; and then get another picture of the same spot when the garden, shrubbery and vines are at their best. The contrast will make both parents and children think it worth while.

Have the children write letters describing all their garden operations and results. Let them state, too, how they like the garden work and what changes they would like to make next year.

Try to form clubs among your children. For example, some schools will form a Potato Club. Others a Rose Club, Tomato Club, Strawberry Club, Poultry Club, etc. In any one school, I advise only one club for the first year. If a Potato Club were formed, all the children would grow potatoes, competing for prizes. They will, of course, grow them according to scientific directions. Instead of a small potato garden, in many cases, the farmer will allow his boy to take charge of one-eighth of an acre of the regular potato field. If the boy can make his rows produce better potatoes than the adjoining ones of his father, it is something to be proud of. Surely the father would allow the boy part of the potatoes for himself, in payment for his work. Let him sell them himself, thus giving him a little business experience.

A teacher could do very much toward improving country appearance by organizing a Town or Village Improvement Society. Both parents and children may be members of this; but the parents must take the lead. Among the objects of such a society would be the improvement of fences about dwellings and on the roadside; the planting of trees along the roadside throughout the village; planting something on vacant lots and waste places; covering all unsightly spots and out-buildings with vines; planting hedges; painting houses; making gravel side walks in country villages, etc. In towns and cities, the Women's Council frequently undertake work of this kind. Such Society may co-operate with school clubs in holding a local fair once a year. No school section is too small to undertake such work.

One feature of these Improvement Societies should be its Literary Society. At its weekly

meetings, part of the time should be devoted to reading and discussing farm literature. Nor is farming the only phase of this work. Domestic Science for girls is equally important. The regular teacher has not time for this, but she can encourage the girls to learn the "why" of many of the home operations. Canned fruits and vegetables would be a valuable part of the annual fair. A winter exhibit of house-grown bulbs would also be interesting.

What Shrubby to Plant.

Cost is always an important item in the selection of shrubbery. For that reason, we should use as much native material as possible. A border of wild shrubbery may be indeed attractive. Apart from its beauty, such a border near a garden has its economic aspect. Birds prefer many of the wild fruits to cultivated ones. To save our cherries, raspberries, etc., from the birds, therefore, plant fruit-bearing wild shrubs near them.

A few suitable shrubs for this purpose are Elders, Dogwood, Mountain Ash, Wild Cherry, Bayberry, Indian Pear, Mountain Holly, Viburnum, Hawthorn, Chokecherry, and Bearberry. A few to buy and plant for the same purpose are Virginia Creeper, Russian Mulberry and Buckthorn.

What Flowers to Plant.

It is wise to introduce new flowers, and thus give variety. There is a "sameness" about most country gardens that approaches monotony.

Among flowers well worth growing are Salpiglossis, Salvia, Zinnia, Centaurea, Candy Tuft, Snapdragon, Petunias, Poppies, Stocks, Foxglove, Bachelor's Button, Canterbury Bells, Sweet William, Cosmos, Verbena, Marigold, Asters, Clarkia, Columbine, Hollyhock, Kochia, Coreopsis, Helianti, Scabious, Eschscholtzia, African Orange Daisy, Godetia and Helenium.

These are in addition to the good old Nasturtium, Sweet Peas, Phlox, Dahlias, etc., which no one will want to discard.

Order the seeds early. Read the directions on the packets. Study the seed catalogues. Above all things, don't plant too early in the spring. Have patience. Let each child have only one or two of the foregoing seed packets for the first year.

NATURE STUDY OF ANIMALS.

H. G. PERRY.

Most of the fur-bearing animals of the Maritime Provinces are included in two orders: the rodents or gnawers, and the carnivora or flesh-eaters. Besides these there are two other orders which are closely allied to the carnivora; the insectivora or insect-eaters, (shrews and moles,) and the wing-handed mammals, (bats.)

The rodents or gnawers are provided with sharp chisel-shaped teeth, well adapted for gnawing, with toothless spaces in place of the canines, followed by molars, adapted for grinding. They are chiefly vegetarian in diet. The carnivora have distinct conical canine teeth, and with molars more or less adapted for cutting. They are mostly flesh-eaters. The insectivora and bats are small carnivora-like animals, which, from their size, seem forced to take to smaller prey, as insects, etc. Some species of tropical bats are said to be fruit-eaters.

Our chief representatives of these orders are as follows:—

Rodents or Gnawers: Hares, beavers, muskrats, squirrels, woodchucks, porcupines, mice and rats.

Carnivora or flesh-eaters: Seals, raccoons, bears, otters, skunks, martens, fishers, ermines or stoats, weasels, foxes, wild cats, lynxes, and the occasionally found wolves, wolverines and panthers. Many of these animals are found only in the rougher and more unsettled parts of the country; others exist only in limited numbers; while others live in such close concealment that their very existence is unknown to many people.

Though the work of the nature student must necessarily be difficult under these conditions, yet through patience he can accomplish much. Little is known of the life habits of many of these animals. Much of the matter contained in popular animal story books of today is open to questions. These books may have a place in nature study, and undoubtedly do contribute something to the work, but like the stories of hunters and trappers and woodsmen in general, they need verification, and must never be substituted for patient observation on the part of the student himself.

For the last two hundred years the white man has waged a fierce warfare against these animals. It is only of late years that some have received

a partial protection through game laws, which at best have but poorly protected. That the bear, wolf, lynx, wildcat, and others of like nature should be exterminated is at once admitted, but on the other hand, there are many which through their destruction of weeds, injurious insects, and objectionable rodents more than compensate for the petty depredations charged against them.

It is a phase of the naturalist's work to help the farmer and lumberman to a just appreciation of their true friends and enemies, and it is largely with this object in view that we are now turning our attention to the wild animals.

Let us hope that every teacher and scholar will feel that each—every one—is called to a personal service in this work. It is true the opportunity for studying many of these animals may not come for years, but be prepared, for time brings many surprises. Others are found everywhere, and should receive careful attention. Make the familiar forms the basis for extended work. Keep notes, however brief; encourage illustrations; be alive to the educational value of the work yourself, and the study will live.

The Squirrel.

The red squirrel is a good representative of the rodents. For close study a caged specimen should be in the school. He soon acts quite naturally in confinement, and much can be learned from his general form, habits of eating, washing, and the like. Treat him to nuts and you will soon see his long front chisel-shaped teeth, and learn something of their use. How does he deal with a lump of hard candy? With a lump of soft maple or taffy candy? The side of the cage, if of wood, will soon show evidence of another use to which the animals of this order put their teeth. Why does he gnaw his cage? Where are the chipmunks or striped squirrels and the flying squirrels at this time of year? The gray squirrel is larger than the red, in the proportion of body length of about $7\frac{1}{2}$: $10\frac{1}{2}$, with a broad thick tail as long as the body. It has been occasionally reported in both Nova Scotia and New Brunswick. The gray species bears among naturalists a much better reputation than his red cousin, and every effort should be made to secure the preservation of this species.

Please report to me all appearances of the gray squirrel in your vicinity.

Rabbits and Hares.

The hare, often improperly called the "rabbit," is a familiar animal. Examine a specimen. To which order does it belong?

The chief distinctions between the true rabbits and hares may be stated as follows: rabbits live in burrows, hares in "forms" or nests, in hollow stumps or logs, or under brush heaps; rabbits feed by day, hares mostly after sunset and during the night.

As far as I am aware the only hare found in the Maritime Provinces is the Northern or Varying Hare, (*Lepus americanus*.) The fur of this species becomes white during the winter, and the hind feet are longer than the head, points in marked contrast to the cotton-tail of Ontario and the Eastern States. Mrs. Comstock in her "Handbook of Nature Study," bases her studies of the "rabbit" upon the cotton-tail, and tells several interesting stories about their habits and intelligence.

What is the winter food of the hare? Visit recently formed hard-wood brush heaps. Note the tracks in the snow, and how hard it is packed. What has happened to the twigs? How did the hare get the bark off the limbs? Does this help you to place it in its proper order?

Find one in the woods, or, better, along a road. As soon as you see it, begin whistling and walking slowly towards it. Note its listening position. How near can you get to it before it leaps away? Notice the length of its leaps, and its tracks. Its long strong hind legs enable it to take jumps of from ten to twelve feet. How is this of value to the animal? The fore legs are shorter and the feet smaller. What is the covering of the bottom of the feet? Learn to distinguish the tracks in the snow. At each leap you will find two small round prints close together, and associated with them two longer and larger marks of the hind feet, but a little forward of, and farther apart than those of the fore feet. From the tracks learn to distinguish the direction in which it is going. Does the length of the jump tell whether it is frightened or not?

Find the tracks of the squirrel and compare with those of the hare.

The Muskrat.

Another animal that deserves mention at this time is the muskrat. Why is it so named?

During thaws in the winter it frequently leaves ordinary haunts and is found around barns and other farm buildings. If a specimen is available, study its color, above and below, the texture of its fur, the size of its body, and the length of its legs and feet. From what you can learn of its habits of life determine the use of the front claws. Note that the hind feet are webbed. What is their use? Observe the tail. What is its covering? How flattened? Some naturalists says it is used as a scull and as a rudder to aid the animal in swimming, and also to slap the water as a warning to its fellows of approaching danger. Watch for verifications of these statements.

The food of the muskrat consists chiefly of weeds and roots. He is especially fond of the roots of the sweetflag, and the yellow pond lily. Have you ever noticed in the fall the empty clam shells scattered in the ice around small "air holes?" These tell of the muskrat's taste for clams, the only animal food of which he is fond.

During spring and summer watch streams and ponds to find the time of day when he is most active. Is he a good swimmer? Note how he carries branches of trees, grass, etc., in his mouth

The muskrat is a builder. Late in the fall he constructs in the bed of the stream, or in a shallow part of the pond, a cone-like mound from two to three feet above the water. This is his winter lodge; its entrance is under water. It is built of grass and reeds, with a filling of mud, and made to look like a natural hummock. In the snug interior lined with dry lily leaves, grasses and weeds, he passes the winter. In some cases, according to the nature of the banks of the pond, he may pass the winter in his summer burrow.

Find such winter lodges, and sketch them. Look for tracks in the soft snow. During summer, tracks are plentiful in the soft mud near the edge of streams and ponds. The paired foot-prints are characteristic only as they are accompanied by a tail-mark, which is a continuous line where he walks, and a broken one where he jumps. You will be quite safe in

calling similar foot-prints, which are not accompanied by the tail mark, the tracks of the mink. Account for the difference in the tracks of these animals.

The muskrat's summer home is dug out from the bank with the main entrance below the water. The nest of this burrow is also lined with grasses, and always above the high water mark, and provided with an air hole above for ventilation and usually a hidden entrance leading out on the dry land. Locate such burrows along the banks of streams and ponds.

Large numbers of muskrats are killed every year for the sake of their fur, and besides man they have many other enemies;—foxes, dogs, weasels, minks, and even hawks and owls are said to prey upon them.

The muskrat is readily taken alive in wooden traps, set with a "figure four" baited with a parsnip or white carrot. A caged animal presents some advantage in studying structure, but nothing can take the place of observation of these animals in their natural haunts.

[If you chance to obtain a specimen of the gray or black squirrel (for at times they are nearly or quite black) I shall be pleased to receive it. Send live specimens by express, "collect," securely boxed and with sufficient food to last him in transit.]

H. G. P.

SPELL THIS.

Some of you who think you are well up in spelling just try to spell the words in this little sentence:

"It is agreeable to witness the unparalleled ecstasy of two harassed peddlers endeavoring to gauge the symmetry of two peeled pears."

Read it over to your friends and see how many of them can spell every word correctly. The sentence contains some of the real puzzlers of the spelling book.

He felt that everything was possible, and to one who is in this disposition the impossible is sure to come. Want of faith in the impossible is really responsible for all that is deliberately dreary in our lives. Those that go whistling down the road, eyes raised to the sun, and hope waiting round the corner, seldom find the excursion of life a disappointing one. — *Evelyn Underhil*.

CENTENNIAL ANNIVERSARIES OF THE WAR OF 1812.

J. VROOM.

XIX.—Another Winter Raid.

March 4.—There was less of actual warfare through the winter months than there had been in the first winter of the war; but an occurrence in itself hardly worth mentioning gives us a date for continuing the series.

Port Talbot, on Lake Erie, the scene of two more raids later in the year, was unsuccessfully attacked in February by a party from Detroit under Captain Holmes. Holmes, in retreating across the country, found his route intercepted by the British in superior force. This was at a point between London and Moraviantown. He chose a good position on an eminence, and threw up defences of logs. Captain Blasden, the British commander, attacked this position on the fourth of March. The snow was about fifteen inches deep, with a heavy crust, making it difficult to approach the little fort. Rejecting the advice of a Canadian to take a circuitous route and attack from the rear, Blasden made a direct assault, and was driven back with a loss of fourteen killed and fifty-one wounded. The raiders got across the river to Detroit with comparatively trifling loss. The attempt to capture them had failed discreditably; but they had failed in their object, and had done well to make their escape.

The story of this incident may be worth telling as a reminder that General Drummond was trying to re-establish military control of the western peninsula of Upper Canada. It corrects the impression that the invaders held the district in full and undisputed possession as conquered territory after the battle of the Thames. In fact, though they had formally annexed it by proclamation in 1813, they had not occupied it. Their most successful incursions in that region in 1814 were looked upon, even by themselves, as brilliant raids for the purpose of plundering Canadian territory; the excuse being that such a destruction of the enemy's resources was necessary for the safety of Detroit.

"Sarcasm," said Carlyle, "is the language of the devil." Be that as it may, it has turned many a school-room into a place of torment.

GEOGRAPHY IN NEW BRUNSWICK SCHOOLS.

ANNA L. RICHARDSON.
(Continued)

Let me digress here a little to speak of aids in teaching. First, what should a Geography text book furnish? Above everything, maps,—maps in abundance, and in clear colors, with all important places marked. The text now used in New Brunswick is lacking here. The one it superseded was very much better; indeed it was excellent in this respect. The text should be simple, concise and interesting, rather than full, in description. It should include an arrangement of topics in natural sequence.

The following supplementary material is within reach of every teacher, and something of the kind should in be a prominent place in the school room for the pupils to use:—Various Railway Guide Books, and other descriptive matter published by the C. P. R. the I. C. R, and other lines of railway. These may be had by sending a post card to the offices and agencies advertised in the newspapers.

Picture post-cards are plentiful, as well as illustrations from magazines, etc. Then the School Library should contain reference books in Geography. I noticed the following in the School Library in St. George. They are indeed excellent — “A Trip Around the World,” “International Geography,” “Picturesque Canada,” “Auld Quebec,” “American Homes” “Old New York and its Streets,” “Rome and its Churches” and “Stoddard’s Lectures.”

Now to go back to the method employed in Grade V. and expanded in Grade VI. Each child provided himself with a note book which was to become a Geography of his own making, and as these would be shown at the public examination, and at home, great pride in their neatness and beauty was evinced by most of the pupils.

We began with North America, and by several oral lessons with the wall and book maps worked out the topics something in this order. Situation: It occupies the northern part of the Western Hemisphere; its boundaries, latitude and longitude were given; then area. We read in class from the text book the surface—much of which they did not understand. The teacher wrote from it upon the board, a brief and clear

paragraph about the surface, first in general, then in detail. Next followed in the same way: Climate, Coast Features, Resources and Industries; Political Divisions and Cities were written neatly in the note books from the board.

The note books were illustrated by pictures cut from papers found at home, and pasted into the books during geography time at school.

In the meantime maps had been drawn, first in scribblers, then copied into the note book. One map for Surface, Coast Features, Resources, and Industries; another, when the topics were reached, for Political Divisions and Cities. Nova Scotia and Prince Edward Island, after the Dominion of Canada had followed North America, were thus put in.

Collections of products and industries were brought in when studied, by pupils who were assigned the work in advance. This was our Museum, and the beginning of work called “Specials” kept up to the end of Grade VIII. with adaptation to the age of the pupils.

In Grade VI, we reviewed North America from the previous year’s books; began to study and make note books upon Quebec, and so to the Pacific Coast. Then followed Newfoundland and the United States. The study here of the Plant Belts and Animal Realms gave many opportunities of asking why? and effects in this way were traced to causes. The “Specials” here took the form of finding additional matter to supplement that of text books about events, persons, places, and industries mentioned in the lesson. Thus by connecting interesting events with places, pupils are beginning to prepare themselves to enjoy travel later on. Sometimes this matter was copied from a home encyclopedia, sometimes a cutting from a paper or an extract from a book was brought in and some practice in the use of books was thus acquired. The pupil came to the front of the room to read his “Special.” Not many wished to shirk this work, and no one was allowed to do so.

The note-books, as things of beauty, had to be dropped when Grades VII. and VIII, were reached. The course in these grades is crowded, for all left over matter accumulates and must be noticed here. The text book must be more used by the pupil himself, but I have never found him able to use it unaided. Pupils recite

by topics. To do this we study the map at first, then, in class, the text part, and enclose in brackets the parts to be especially studied at home. The "Specials" are extended. A great deal of outside material is found, and the reading table has matter upon it for those who have little access to books and papers at home.

Our course of instruction practically makes Grade VIII. responsible for the whole book; and then lays down some of that same work for Grades IX. and X. Would it not be well to leave something for those Grammar School Grades to take up as new work? Then too, Geography is a living growing subject and Grade VIII. must keep it up to date.

If Geography for eight years continuously held the place in the list of studies here given it, surely with pupils of average ability and good intelligent home environment, a two-thirds value upon a fair Grade VIII. examination. should be only the usual result. Is it?

However, even if the marks are not all to be desired, I trust some geographical knowledge has been left with our pupils—a power to reason and judge developed—a greater power to help themselves by knowing where and how to look for material attained. An appreciation of an overruling power in this world, of nature and of man; an ambition to do their part in carrying on the world's work, as well as a deeper patriotism for their own Canadian Home; these may be a few results from Geography study in our schools today.

In a well-known Boston school there was a boy conspicuously dull at his Latin. He was a straightforward fellow and a gentleman by birth and breeding, but he was a bungler at syntax. One morning he had tangled himself in a simple phrase. The teacher asked a question that should have cleared him. But the poor lad did not know the answer. Then the teacher leaned back in his chair, rolled his eyes to the ceiling, and said for all the class to hear: "I have been told that it is a hard thing to stuff a wildcat with butter, particularly if you have to do it with a hot awl; but that is child's play compared with putting Latin in a boy like this." Of course the laugh came: but as the boys laughed they despised the teacher.

GEOGRAPHY QUESTIONS ON CANADA.

Nova Scotia, Grade V.

M. W. McGRAY.

1. Draw a map of the Great Lakes and St. Lawrence River, naming the canal, river, etc., by which one lake is connected with the other. Locate on this map, Quebec, Montreal, Toronto, Hamilton, Niagara Falls and Fort William.

2. Name the rivers on the Pacific Slope, giving their direction and telling where each empties. Which of the counties of New Brunswick touch the Bay of Fundy?

3. Describe the climate, soil, and surface of Prince Edward Island. Give the area; and name the three chief towns of the Island, telling a few facts about each. How near is Prince Edward Island to Nova Scotia, New Brunswick, and Cape Breton?

4. Name the oldest city and the largest city in the Dominion. What city is the capital of the Dominion? Where is it? Name three strongly fortified towns of the Dominion. What are the two winter ports of Canada? What port on Hudson's Bay has lately become very important? Why?

5. What and where are the following, and for what are they noted? The Banks, Dawson, Sudbury, Betts Cove, Moncton, Banff.

6. From what city in the Dominion is there a regular line of steamers to China, Japan, and Australia? Name four cities in Canada from which steamers run regularly to Great Britain. The Grand Trunk, Intercolonial, and Canadian Pacific Railways run from where to where?

7. Name the lakes of Manitoba. What place in Newfoundland is the landing-place of the Atlantic cable between Newfoundland and Ireland? Describe the city of Quebec, telling how it differs from other Canadian cities. Give the area of New Brunswick?

8. Where in the Dominion is coal abundant? gold? silver? copper? Where is lumbering the chief industry? the raising of cattle? the raising of potatoes? the canning of salmon? From what part of Canada do we get large quantities of furs? Which province has the most inhabitants in proportion to its size?

PRIMARY POETRY.

This month we are going to study a story poem. The man who wrote it was Henry Wadsworth Longfellow, an American poet. He was born more than a hundred years ago, and his birthday comes on the 27th of this month.

I knew a little girl who was very fond of reading and hearing Longfellow's poems. One morning, while she was getting dressed, she heard her father, who was reading the newspaper, call to her mother "The poet Longfellow is dead." "O dear!" said the little girl, "now I suppose we'll never have any more good poetry."

A great many children were sorry when they heard that he was dead. He loved children, and wrote many poems that they liked. And he has often been called the children's poet.

There is nothing about children in the poem we are going to talk about. It is a story of a horse, and it is called "The Bell of Atri."

Once upon a time, far across the ocean, in the land of Italy, there was a little town called Atri. In that country was a wise and good King who wanted all his people to be fairly treated and happy, so he had a great bell made, like a church-bell, and hung up in the square in the middle of the little town. Then the King rode through the streets in a great procession. The trumpets blew, and then all the people were silent while the king told them what the bell was for. "Whenever any wrong is done to you," he said, "go to the square, ring the great bell, and the ruler of the city will see that you have fair play."

After this the people in Atri lived very happily. When a man was wrongly treated, he rang the great bell. Do you ever listen to a bell and think that it sounds as if it were saying certain words? When this bell rang, it seemed to say, "'Some — one — hath — done — a — wrong — hath — done — a — wrong.'" Then the Syndic (that is what the ruler of the town was called) would have the wrong put right.

Well, as time went on, the rope that pulled the bell wore out, and some one twisted a vine round it to mend it. The vine grew and grew, and its leaves quite covered the rope.

Now, there was in the town of Atri a Knight who was very fond of hunting,

Who loved to hunt the wild-boar in the woods,
Who loved his falcons with their crimson hoods,
Who loved his hounds and horses, and all sports."

But as he grew older, he lost his love for hunting, and for his dogs and horses, and cared for nothing but money. He sold his hounds and his falcons and all his horses but one, who was his favourite. And all day long he thought of nothing but how to save money. One day he said,

"What is the use or need
To keep at my own cost this lazy steed,
Eating his head off in my stables here,
When rents are low and provender is dear?
Let him go feed upon the public ways;
I want him only for the holidays."
So the old steed was turned into the heat,
Of the long, lonely, silent, shadeless street;
And wandered in suburban lanes forlorn,
Barked at by dogs, and torn by brier and thorn,"

It was very hot in Atri, and in the summer days, as is the custom in hot countries, every one rested in the afternoon. The shop shutters were put up, and the blinds drawn down, and there was no one in the streets. One afternoon while every body was asleep or dozing, the great bell rang out. Do you remember what it said? "Some — one — hath — done — a — wrong — hath — done — a — wrong." Can you say it all together, so that it sounds something like a bell?

Well, the Syndic was sound asleep, but the bell woke him. He got up, put on his robes, and very hot and sleepy, went out into the square to see who was ringing the bell. He hurried, for the bell kept on ringing. When he got to it, what do you think he saw? Why, the poor, thin, starving horse of the Knight of Atri eating and tugging at the vines that grew over the rope. "Ah ha!" cried the Syndic,

"This is the Knight of Atri's steed of state!
He calls for justice, being sore distressed,
And pleads his cause as loudly as the best."

In the meantime, all the townspeople had come running to see what was the matter. And one after another told how they had seen the poor old horse wandering about the roads without food or shelter. Then the Knight was sent for, and questioned. At first he only laughed; but at last he grew angry and said the horse was his, and he would do as he liked with it.

Then the Syndic spoke sternly to the Knight. He read aloud the King's command that any

one who was wrongly treated and rang the bell, should have the wrong put right. "You are a Knight," he read "and a Knight should be honored. But what honor will come to you from starving your poor horse? He cannot speak to tell his wrong, but he has rung the bell. Now according to the King's command, because the horse carried you well when he was young, you must give him food and shelter now that he is old."

The Knight went home ashamed, and all the people went to take the horse to his own old stable. When the King heard about it, he laughed for pleasure.

"The King heard and approved, and laughed in glee,
And cried aloud: "Right well it pleaseth me!

My bell pleads the cause
Of creatures dumb and unknown to the laws;
And this shall make, in every Christian clime,
The Bell of Atri famous for all time."

Let us see how well you remember the story. Where did it all happen? When? Do you know any other story that begins "Once upon a time?" Do you like stories that begin in that way?

What was the King like? What did he want? What did he have made? Suppose we put a picture of the great bell on the board. Where was the bell hung? What was it for? How did the people know this? Tell about the King riding through the street.

What was the ruler of the town called? What did he have to do when any one rang the bell? What did the bell seem to say?

What can you tell about the Knight when he was young? When he was old? What did he do with his favorite horse? What word does the poet use that means "horse?"

What had happened to the bell rope? Tell what the poor old horse did when his master turned him out.

How did it happen that no one was in the streets when the bell rang? Tell about the Syndic when he heard it. What did he say when he came to the bell? What stories did the people have to tell when they came? Then what did the Syndic do? Tell what the Knight said, and what the Syndic made him do. Was the Knight sorry for what he had done? How did the people feel about it? How did the King feel when he heard it? Had he meant the bell to be rung by dumb creatures, or only by men?

Then why was he so pleased? (What else could men do if they were ill-treated? What can you do? What can an animal do? Then why was the King so pleased?) Are dumb creatures unknown to the laws now? Are there any laws about how they are to be treated?

Who wrote this story-poem? When is his birthday? How long ago was he born? Do you know any other poems that he wrote?

[I hope you remember some of the verses about the moon that we learned last month. Longfellow wrote these lines about the moon.

"In autumn the blood-red Moon climbs the crystal walls of heaven."

Did you ever see the moon look red?]

The teacher should bear in mind that the aim is to have the children grasp the story. Have the point about the reason for the King's pleasure clearly understood, but do not bear too hard upon the moral. Stimulate the imagination as they tell the story. Encourage them to give the different speeches in their own words, in the first person. Let one boy be the Syndic, and another the Knight. The whole story lends itself to acting, and there is room for everybody in the procession and the crowd.

Longfellow for Older Pupils.

For story telling, the Falcon of Ser Federigo, King Robert of Sicily, The Legend Beautiful, Azrael, are good selections. Longfellow has been called the poet (1) of the sea, (2) of night, and (3) of autumn. It would be interesting to justify these epithets by quotations; e. g. see for (1) The Building of the Ship, The Lighthouse, My Lost Youth, The Discoverer of the North Cape. (2) The Day is Done, Footsteps of Angels, Birds of Passage, Twilight. (3) Autumn, The Spirit of Poetry. Introduction to Tales of a Wayside Inn. Other interesting topics to trace in his poems are: The poet's friends; his travels; his home; his childhood and youth; what he writes of other poets, Keats, Chaucer, Shakespeare.

The Educational Publishing Company, 50 Bromfield Street, Boston, offer a store of useful and inexpensive material for programmes for Longfellow day; among other things there are portraits and blackboard stencils of the poet, and of his house in Cambridge.

THE STANDARDIZATION OF ENGLISH SPEECH.

By A. H. MACKAY, Supt. of Education, Nova Scotia.

The literary reviewer of the *Times* recently discussed "English Pronunciation," by Robert Bridges, the newly created Poet Laureate. He summed up the first change in regard to the degradation of our unaccented vowels, as "the blurring and running together of *a* and *e* and *o* and *u* into one indeterminate sound — the sound of the last syllable in *danger* — in which the Canadian hears no sound of *r*. He noted finally: "If we add to these the bogus pronunciations produced by unphonetic spelling, and the English habit of 'swallowing' words, there can be little doubt, for anyone who carefully observes his own utterance or that of his friends, that the speech of the educated classes in England is undergoing serious changes at the present moment. That these changes are regrettable most of us will admit. Whether or not they can be checked, or must be allowed to work their will unimpeded in the language, is another question."

About a month earlier Mr. W. D. Lighthall was denouncing the "defective English spoken in Canada" before the Royal Society at Ottawa.

In 1911, at the official Education Conference of the Education Departments of the Empire in London, where the simplification of English spelling was unanimously resolved to be *urgent*, high authorities from every quarter of the globe gave strong testimony to the tendency of variation, for some of which our present orthodox — but deformed — spelling was held responsible.

It was maintained, however, by your humble servant that the change of pronunciation today all over the world is going on at a very much slower rate than in the island of Great Britain before the day of general public education. Defective as are the keys to pronunciation in our dictionaries, there is evidently more stability in the qualities of speech at the beginning of this century than ever before. With a phonetic alphabet, or even without, we should now be able to transmit a uniform speech from the Planes of Shinar to the Isles of the Pacific, and from the date of the completion of the Oxford Dictionary to the final doomsday.

The anatomical diagrams of the numerous valuable texts on phonetics, and the ingenious notations of speech made visible, may not alone be able to accomplish it, but with the admirable and absolute physical standard now possible in the phonograph we shall be able to transmit speech with precision uniformly over the surface of the globe and down the ages. Those who already in correspondence schools are learning to speak foreign languages from the phonograph, the thousands who already are answering their correspondence by speaking into the dictaphone and sending to their stenographers sound-engraved cylinders suggestive of the literary vehicles of ancient Sumir and Accad, the tens of thousands who now nightly see and hear the opera and the drama through the magic of the kinetophone — all these people need no further evidence of the present possibility of recording with precision the sounds of speech and the multiplication of its records indefinitely.

All we need now is the *standard speech*. Its records

multiplied by electrotypy can be made one of the cheaper essentials of every teachers' training college or school where English is used. The first work of all candidates for the teaching profession should be the complete mastery of the standard alphabetic sounds, which in turn it would be their duty to develop in the speech of every pupil in their schools. We find at present under good teachers that the Scotch, Irish and Welsh speak more distinctly than English people, who are not aware their pronunciation is not standard. When people who can use their vernacular dialects speak English more distinctly than the English themselves, we may be certain the standard English pronunciation can be very approximately acquired in any schools in any country.

But how shall we get the Standard English? Possibly no present dialect would be universally acceptable. But a competent and authoritative Commission might be able to agree upon an eclectic standard, the different standard sounds being selected on the merits of their musical quality and their distinctness from each other. These fundamental alphabetic sounds should be as few as possible for economic reasons, as well as for the greater ease of general mastery. Their aesthetic qualities would be none the less on this account.

The standard sounds spoken into the phonograph by a generally acknowledged beautiful speaker would be the fundamental feature — a standard for imitation; while phonetic texts, with their diagrams, signs, and exposition, would undoubtedly still be useful.

With a phonetic alphabet adapted to such a standard of sounds, the common sense of the people would be likely soon to insist on the rationalising of spelling, so that the written and spoken languages — the two now widely different — would become one, — beautiful, simple, and capable of continuing uniform throughout space and time.

Does not some such programme promise something attainable? Is it not worth some avocational effort at least on the part of everyone interested in the teaching and even the use of our language?

Many of our readers will be interested in Dr. MacKay's opinions as to the need of a standard speech, and the means by which it may be established. His article is reprinted in full from the "Teacher's World" (London) where it appeared in August, 1913. The supplement to the same issue contained an article on the subject by Professor Rippmann, Chief Inspector of schools to the London University, which is in substantial agreement with that of Dr. MacKay. Professor Rippman reminds us that the idea of an infallible authority on pronunciation is not very old.

In the sixteenth century there was doubtless a good deal more variety in "polite speech" than now, though not so much as the spelling of that age suggests. There were no pronouncing dictionaries in those days. Dr. Jolinson, in 1755, only indicated which syllable was stressed. James Buchanan in 1757 was (as he maintained) "the first who endeavored to make the proper pronunciation of our

language of easy acquisition to foreigners, and to introduce an uniform one for the sake of the natives, amongst whom it is still so notoriously vague and unstable.

But Buchanan was severely criticized, and he and his successors,—Sheridan, Walker, Smart,—have one by one fallen from their pedestals of infallibility.

And so dictionary follows dictionary, each professing to give the correct pronunciation: some recent ones, however, show greater caution, and supply the anxious seeker with two or even three pronunciations of the same word.

What are we to do in such a case? Are we to say "iither" or "eether?" to give "launch" the sound of "aw" or of "ah?" to make the vowel in "off" long or short? to utter the "t" of often" and the "d" in "Wednesday?" to pronounce the "l" in *falcon* and "golf?" Again, are we to agree with certain Scotchmen in pronouncing "leisure" so as to rhyme with "seizure," or in stressing "inquiry" on the first syllable? Are we to follow certain Americans in adopting "dooty," "Toosday" "introdoost?" It is no solution of the difficulty to say, pronounce as you please, any more than we can get over the difficulties of our chaotic spelling by saying, spell as you please. Before we can finally establish a spelling that is a guide to the pronunciation, we must determine what is the best form of English speech.

Professor Rippmann admits that to decide upon this "best form" and establish it as a standard is a difficult task, but he believes it can be done by means of phonetics. The usages of the best public speakers should be recorded by the phoneticians, and the records submitted to a representative conference on standard speech, to serve as a basis for their deliberations.

A writer in the current number of "The Journal of English Studies," discussing the best method of securing correct pronunciation in Schools, writes,

Every teacher of English, whether in the primary or secondary school, should be trained in phonetics, and pass an examination in spoken English, something like the oral examination now held in other languages, before he is permitted to teach it. At intervals, the teacher who has thus qualified should be compelled to submit to a further test, and if his pronunciation has deteriorated, to attend a second course in phonetics before his certificate is renewed. His case would be similar to that of the English-born French or German specialist who finds it necessary to make frequent visits abroad to prevent himself from becoming stale. By this means the teacher would possess an ideal by which to correct his own pronunciation and a partial safeguard from infection by his pupils; and by the constant application of phonetics to the reading and recitation of the pupils some improvement in their way of speaking also might, in the course of one or two generations be affected.

But it is hard to see how such a plan could be carried out until a standard English is agreed upon.

To quote Professor Rippmann again:

"In the absence of a standard, the existing differences are bound to become accentuated. Our spelling is useless as a check to changes in the development of English speech, and change is by no means inevitable or desirable. There may be no harm in a dialect changing, and it will doubtless continue to change; but if we once decide what is the best form of English, and set it before our teachers as the ideal, and train them so that they are keenly interested in the sounds of the living language, and learn to discriminate them—then, in these days of compulsory education, change will be much retarded, and may, indeed, be arrested. Then we shall enable every child to possess, in addition to its local dialect, a form of English speech that is clear and musical. That a rational spelling will go hand in hand with it cannot be doubted for a moment.

IN THE WEST.

The following account is taken from an article in "The School," written by J. T. M. Anderson, Inspector of Schools in Saskatchewan. The article is intended as a protest against the bilingual method, but our extracts are chosen to shew the conditions under which some teachers work in the West—the difficulties, the interest, and the rewards.

"Here is an example" writes Mr. Anderson, "of what can be done at school among foreigners by a patient and sympathetic English-speaking teacher." His experience is given in his own words:—

"After leaving Manitoba I took charge of a school in a large foreign settlement in Saskatchewan. I distinctly remember the long dreary drive of twenty-five miles, through hail and slush, behind a patient ox-team, as my secretary escorted me from the little railway siding. Long after the "midnight dreary" we pulled up before a low mud-covered hut which I supposed was his stable, but which I soon learned was to be the joint abode of the man, his wife, four children, and the new teacher. It was one small room, but it served as bedroom, dining room, and kitchen, besides having other uses too numerous to mention. I shall pass over that first night. It is too painful to recall.

Next morning I met my trustees, only one of whom, a Swede, was able to speak to me. Of the other two, one was a Hungarian, the other a Pole. I ascertained that it had been proclaimed throughout the neighborhood that I was to open school that morning, and I further learned that it was a new school, and they had never had a teacher before. I was informed by the Swede, a very genial fellow, that most of the people had never seen a

Canadian teacher, and he smiled as he added that seven nationalities were represented in the district.

I did not eat much breakfast; I couldn't. My environment forbade it. If I had had money enough I would have taken the first train for the East. But I resolved to try to do my duty, at least for a time. Upon my early arrival at the schoolhouse I found that several sleigh loads of people had got there before me, and when I entered the room I found fifty or sixty boys and girls standing round the box-stove. The parents stood about and eyed me curiously. One or two of the more enlightened said, "Good-day, meester," which was practically their entire fund of English.

With some little difficulty I persuaded the parents to go home, and then I turned to my prospective pupils. After they were all in their seats I took my place before them. I soon learned that over forty of them knew no English, not even, 'Yes' or 'No.'

Space does not permit a detailed description of the excellent work of the teacher, but some of the general results of his efforts must be recounted. His feeling of aversion soon wore off and he became intensely interested in teaching these children English. In a few days they were making use of English sentences, executing commands and playing games. The little girls began to appear in cleaner dresses; the boys made free use of soap, towels and combs; and instead of the huge "chunks" of bread in filthy rags, there soon appeared neatly wrapped lunches, with the bread carefully sliced. Thus the work went merrily on, and in three months the enrolment reached over sixty.

Then came a grand union picnic of the six or seven school in the vicinity. A parade was held, and the pupils of the school described won first prize for best marching and general appearance. How proud those parents were! A great many Canadians were made that day.

After summer vacation the teacher returned to his now beloved work with renewed vigour and the fall term ended with a grand concert on Christmas Eve. Over forty numbers appeared on the programme, and over forty children read, recited, sang, or took part in dialogue, and "every word used was English." It was interesting to listen to seven boys, each reciting a verse from "The Choice of Trades," and each boy of a different nationality. At the conclusion of the programme a beautiful Christmas tree was stripped of its presents, and many a little heart thereby made glad. Then came the national anthem, sung by these coming citizens, while their more or less ignorant parents looked on with smiling faces.

Thus in about nine months these children gained a good working knowledge of our language, were given an insight into Canadian social life, and started on the march upward. All this happened about four years ago, but this good work is still going on, and this year a Polish boy from this original class obtained a third class teacher's diploma.

A teacher receives in the way of respect and love very much what he or she deserves.—
A. C. Benson.

TALKING IN THEIR SLEEP.

"You think I'm dead,"
The apple tree said,
"Because I have never a leaf to show,
Because I stoop,
And my branches droop,
And the full, grey mosses over me grow;
But I'm alive in trunk and shoot.
The buds of next May
I fold away;
But I pity the withered grass at my root."

"You think I am dead,"
The quick grass said,
"Because I have parted with stem and blade;
But under the ground
I'm safe and sound,
With the snow's thick blanket over me laid,
I'm all alive and ready to shoot
Should the spring of the year
Come dancing here,
But I pity the flower without branch or root."

"You think I'm dead,"
A soft voice said,
"Because not a branch or root I own,
I never have died,
But close I hide
In a plump seed that the wind has sown.
Patient I wait through the long winter hours.
You will see me again;
I shall laugh at you then
Out of the eyes of a hundred flowers."

THIS COLD LITTLE MONTH.

This cold little month with its twenty-eight days
Is the season of snow with its fast-fleeting sleighs,
When icicles hang from each corner and nook,
And skaters are skimming on river and brook,
When the sparrows come in from the snow-covered lane,
And chirrup for crumbs by the bright window pane,
And dear little Cupid stops in on his way,
With missives of love on St. Valentine's Day.

— *Ladies' Home Journal.*

THE SNOWSTORM.

Announced by all the trumpets of the sky
Arrives the snow, and, driving o'er the fields,
Seems nowhere to alight; the whited air
Hides hills and woods, the river and the heaven,
And veils the farmhouse at the garden's end.
The sled and traveller stopped, the courier's feet
Delayed, all friends shut out, the house-mates sit
Around the radiant fireplace, enclosed
In a tumultuous privacy of storm.

— *Emerson.*

CORRECT USAGE.

Fill the blanks with "see", "saw", or "seen." After they have been filled in correctly, have them read by a number of pupils to get the drill on the necessary words.

"Did you — my bat, Tom?"

"I — you with it yesterday. I haven't — it today."

"Have you — it today, mother?"

"No; if I had — it, I should have said so long ago. Perhaps Frank has — it."

"Have you — my bat, Frank?"

"No, Robert, I haven't — it. In fact, I've been so busy that I haven't half — you. How could I have — your bat?"

"My bat isn't always with me. I thought you might have — it about the house."

"No I haven't — it. Maybe Margaret — it yesterday and put it outside."

"I think I — your bat in the yard this morning, Robert," called out Mr. Gresham.

"I remember now that I — it here myself," cried Robert, rushing out. "Thank you, father."
— *The Teacher*.

Not long ago the School Board of a New Brunswick town that has an exceptionally fine staff of teachers had an application from a teacher holding a Superior School license and a Physical Training certificate. She offered her services for \$260 a year in addition to the government grant. Her offer was not accepted. She received an answer to the effect that the Board did not care to engage a teacher who was not worth more than the sum mentioned.

It is well that such instances should be known. We hear a great deal about the need of increased salaries for teachers, and the REVIEW has always supported the demand. But are teachers themselves quite free from blame for a low standard of payment? Do they set a fair value on their work? And if not, do they realize the injustice they are doing to the whole profession, as well as to themselves? If a teacher with the credentials named, is really worth only \$260, is she worth anything? The School Board in question do not think so.

The REVIEW has to thank the St. John Business College, and the Canadian Office and School Furnishing Company of Preston, Ont., for very handsome calendars for 1914.

COMPARISONS.

In the issue of *The Schoolmaster* for October 11th, an account is given of an interesting educational experiment conducted at a American school. Complaints that reading, writing, and arithmetic are not so well taught as they used to be are heard frequently in America concerning American schools, as well as in England about our own schools. In Springfield, Mass., U. S. A., the matter has been brought to a test. In 1890 there were discovered in the attic of the High School building in Springfield old sets of examination questions that had been written in the fall of 1846. They consisted of printed questions in geography and arithmetic, with answers written on the printed sheets, and written tests in spelling and penmanship. Two of these tests were later, in 1905, given to 245 ninth-grade pupils in the Springfield schools, and the results were compared carefully with the results of the tests of 1846. The following is the comparison:—

SPELLING.

	1846	1905
Number of pupils who took tests....	85	245
Average per cent. correct.....	40.6	51.2

ARITHMETIC.

	1846	1905
Number of pupils who took tests....	79	245
Average per cent. correct.....	29.5	65.5

Of the class in 1846, only sixteen of the eighty-five pupils stood as high in spelling as 70 per cent., the present "passing" mark in most schools. Three pupils had no words spelled correctly; nine had only one right; while twenty-four, or more than one-fourth of the entire class, misspelled seventeen or more words. Comparisons of the geography and penmanship were even more exclusive evidence of the superiority of the pupils of 1905 over those of 1848.
— *School World*.

Look not mournfully into the past; it comes not back again.

Wisely improve the present; it is thine.

Go forth to meet the shadowing future without fear and with a manly heart.

— *Longfellow's Hyperion*.

MUSIC IN THE FIRST GRADE.

GRACE, M. POORBAUGH.

An experienced primary teacher in New Brunswick pronounces upon this, "One of the most sensible and workable papers I ever read" Through the courtesy of "The Western School Journal," we present it to our readers:

Nothing plays a more important part in the life of the primary school than music. Be ready to sing a number of songs for the children the first day of school. They will like nothing better.

Let the songs which we teach be seasonable — songs which will correlate with whatever we are teaching, or those which have an all-the-year-round fitness. With such a variety of song books on the market, it will not be at all difficult to do this. Always select songs which tell a story, for these alone arouse interest.

When teaching a song first sing it to the children. After singing it, find out by questioning if they understand the words. If there is any part they do not understand, explain it to them. Sing the song several times, letting them listen. Then repeat one line at a time and let them repeat it after you. When they know the words fairly well, sing one phrase at a time, and let them sing it after you. Repeat this several times, then let them sing it through with you.

After singing it with them several times, let them try it alone, that you may hear their mistakes if they make any, and that they may become independent in their singing.

Begin at once the work of individual singing. Not enough attention is given to this in the primary grades. We all agree that individual reading is absolutely necessary in order that every child may become a good reader; then why isn't individual singing just as necessary if every child is to become a good singer? It is an easy matter to get little children to sing alone. They are eager to do it.

Perhaps some may sing all in one tone, but that does not detract from the real pleasure in trying, nor from the value of the effort. Many of the children know songs before they come to school. Say to them, "Who would like to sing alone for us?" You will be sure to get volunteers. When the child comes forward and sings, be sure that nothing happens to embarrass

him. The most important thing is to make him lose all self-consciousness.

If through self-consciousness or nervousness he gets it wrong, help him. It is a good plan for the teacher to hum along with the child and encourage him to follow her. Never tell him he sang wrong, or did not know the song, or did not go up, or any of those things, but rather praise him for his effort.

You will find that in nearly every case where an upper grade pupil protests that he cannot sing, at some time some one has laughed while he was trying. All of us are very sensitive to criticism when we sing. This danger, therefore, cannot be too strongly guarded against with little children. Select some of the best and some of the poorest singers to sing alone every day. There are several reasons for doing this. It develops poise, self-reliance and self-expression just as in the reading lesson. It creates a desire on the part of the pupils to do better than some one else has done, which of course leads to marked improvement in the singing in general.

At all times insist that the children sing softly. Do not tolerate for a moment harsh singing. Another point to be kept in mind in the music work is this:

Children do not make progress in any subject unless they have daily practice. Is not this daily practice just as necessary in music? Do not, however, have the music work come all at one time. The rote song is a means of relaxation. When the children become restless and tired, arouse them by the singing of some well chosen song.

Vary the work from time to time, not all rote songs or all drill work, but some of both. Always have several rote songs going at the same time that the children may not tire of any of them.

Suppose you try this plan once a week; perhaps Friday afternoon will be best. It will add variety to the work and be something to which the children can look forward. Call it a concert. They will enjoy it, for they delight in doing things that sound "grown-up."

Let them select the songs they want to sing. Some may sing solos and two or three children may sing together. Of course the school is the audience during it all.

So far nothing has been said about real drill

RURAL SCIENCE SCHOOL

TRURO, N. S.

The Rural Science School will open at Truro, Wednesday, 10 a. m., July 8, 1914, and will close Thursday evening, August 6.

Classes are open to teachers of Class A, B and C, who are recommended by the Normal College Faculty. Those of Class B and C who are strongly recommended by an Inspector are also admitted.

Application for admission must be made before June 30. The Course of Study follows:

COURSE OF STUDY.

1. All Candidates for R. S. Diploma shall be required to complete satisfactorily the following courses: (a) Nature Study—1 hr. per week for 1 term, (b) Horticulture—3 hrs. per week for 1 term, (c) Biology—2 hrs. per week for 1 term, (c) Botany—6 hrs. per week for 2 terms.

2. Candidates shall elect as "majors" one subject from each of the groups A and B following:

A	Entomology.
B	Chemistry.
	Economic Zoology.
	Agriculture.

Each of the major courses elected shall involve as a minimum 6 hrs. per week class and laboratory work for two terms.

3. Candidates shall elect any two of the following as "minors," involving as a minimum two hours per week class and laboratory work for one term: (a) Bacteriology, (b) Brush and Cardboard Work, (c) Woodwork, (d) Mechanics, (e) Wether-work, (f) Geology and Soil Physics, (g) Birds, (h) Plant Diseases.

4. Work done in the Normal College in the following courses will be credited to the candidate for a Rural Science Diploma: (a) Brush and Cardboard Work, (b) Woodwork, (c) Wether-work.

Buy a single ticket and procure a Standard Certificate.

For further particulars see Journal of Education, October, 1913. For lists of boarding houses and similar information, apply to

E. W. CONNOLLY, REGISTRAR

work. Is there anything which we teach in the primary grades or, in fact, in the upper grades, which does not require drill, drill, drill? The music work is no exception.

Just as variety of drill work is necessary for the learning of words in the reading work, so must there be a variety in this drill work while teaching the technical parts of music.

This drill work should begin the first week of school. Children love to play games. Tell them that you are going to show them how to play a game. [This game is a drill on the octave do—do.] Ray stands and calls "Bennie," using the tones do—do. Bennie stands and calls "Teddy." Then Teddy stands and calls "Eddie;" and so the game goes on as long as you care to let it. They will like it so well that you can use it at least several times a week. Not only is it a splendid octave drill, but the children are learning each other's names, which is necessary at the beginning of school.

Another device which is a good octave drill is this: Let the children play the aisles are streets; the seats, houses; the children, the people

living in these houses. They have often seen men selling vegetables and heard them as they called, "Potatoes," "Apples," etc., They may take turns in playing they are men selling things. This device is especially good during the fall months. Did you ever know of a child who didn't delight in playing engine? Let one row of children play they are the cars, and one child as leader be the engine. As they go round the room the engine goes toot—toot, toot, toot (do—do, sol, do). Then you may say, "the train is nearing the station," and the train slacks up and stops. [Then you may say, "there is always newsboys at the station selling papers. Who would like to be a newsboy?" Every hand goes up.

Then you may put a cap on some child's head and some papers under his arm, and he starts out calling "morning papers," using the octave do, do, do—do.

Another child may sell water lilies in the same way; another may sell popcorn; another sandwiches.

Then some child may be the brakeman and

call "All aboard" (do, do—do) and the train moves on.

As the train comes into the next station, the newsboy may call "evening papers."

This device may be carried farther.

Let the passengers leave the train and go to their homes. (Seats.)

Then some one may call "Supper" (octave do—do). After supper all heads may go down on the desks and every one is asleep for the night.

Then some one may waken them by calling "Breakfast" (octave do—do).

The time for the music lesson is over for the day, and the children have been wholly unconscious of the results you have obtained—to them it has simply been play.

At another time you may tell them about large bells which when played upon make beautiful music. Such bells are called chimes.

Then you may ask them if they would like to have some real, live chimes, some that they can really play. By this time you should know which children make the tones correctly. Select eight of the best singers and ask them to stand in a row before the school. Tell them you are going to change their names to: do, ti, la, sol, fa, mi, re, do.

As you pass in front of them, touch each child on the head and give him his new name. At first you may ring the chimes yourself, singing up and down the scale so that the children may hear the correct tones.

Then select some child to come forward and play the chimes.

At first only the scale descending and ascending can be used, but after a time easy skips may be introduced, as 1-3, 1-3-5, 1-3-5-8, etc.

The children never tire of this device. Each time it is used, a new set of children be selected to be the bells. The same device may be changed to that of a piano and carried out in the same way. This device may also be used with good results. Play the children are ringing a church bell. Raise arms as if holding a rope, and as they do this sing ding-dong, to the octave do—do, meanwhile pulling down the rope.

CURRENT EVENTS.

To Canadians the leading event of last month was the death of the High Commissioner, Lord Strathcona, which took place in London on the twenty-first of January. The Canadian House of Commons, which is now in session, adjourned for the day out of respect to his memory. Lord Strathcona was born in Scotland. In early manhood he was employed for some years in Labrador, as a factor of the Hudson Bay Company. Later he went to the Northwest; and he was the last to hold the position of Governor of the Hudson Bay Territory before the transfer of the territory to the Dominion of Canada. He was one of the promoters of the Canadian Pacific Railway, and on its completion in 1886, he received the honour of Knighthood. As Sir Donald Smith, he was a prominent man in Canada; being president of the Bank of Montreal, founder of the Royal Victoria Hospital in Montreal, and a generous benefactor of McGill University. In 1897, he was raised to the peerage as Baron Strathcona and Mount Royal; and as High Commissioner for Canada he has been recognized as one of the leading statesmen of the Empire. His funeral in Westminster Abbey was attended by the High Commissioners of the other Dominions, and the ambassadors of foreign powers, and the King and Queen were officially represented.

The Canadian railway report for the year ending with last June shows that there were at that time over twenty-nine thousand miles of railway in operation in the Dominion, and more than eighteen thousand miles under construction.

The new Canadian parcel post system comes into operation this month. The limit weight is eleven pounds. Five cents will carry a parcel one pound in weight for a distance of twenty miles. For ten cents, it will be carried to any post office in the province, or in an adjoining province; for twelve cents, to any part of the Dominion, except where long journeys by stage coach or dog teams make a higher rate imperative.

By the new regulations for leasing petroleum and natural gas areas, Canada keeps absolute control of such deposits. The government reserves the right to take over the works at any time. It is estimated that the development of the New Brunswick shales will give employment to eight thousand men. It is reported that a very large oil producing area has been found in Alberta.

The redistribution of seats in the Dominion Parliament follows the decennial census. Quebec retains a membership of sixty-five, the representation of the other provinces to be rearranged proportionately. New Brunswick will thus lose two members, Nova Scotia two, Prince Edward Island one, and Ontario four; while the Western Provinces will gain by their relatively large increase in population.

A commission will be appointed to report upon the Georgian Bay Canal scheme, the cost of which is figured at more than a hundred million dollars. It is proposed to carry ocean going ships by this route from Montreal to Georgian Bay; and, incidentally, to develop valuable water powers along the route. But, though the project has been put forward from time to time for fifty years, the great cost has heretofore been prohibitory.

The dredging of a thirty-foot ship channel from Montreal to the sea is practically completed. The work of dredging covered a total distance of about seventy miles.

SUMMER SCHOOL OF SCIENCE

FOR ATLANTIC PROVINCES OF CANADA

Session of 1914 at Charlottetown, P. E. Island, July 14th to 30th

NATURAL SCIENCES, LITERATURE, ETC., TAUGHT. SPECIAL ATTENTION
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A LARGE NUMBER OF SCHOLARSHIPS FOR COMPETITION. TUITION FREE.

All information cheerfully furnished by J. D. SEAMAN, Secretary, 63 Bayfield Street, CHARLOTTETOWN, P. E. I.

The proposed new storage dam on the St. Maurice River, if it is built, will be the largest dam in the world; and the proposed new dry dock at Halifax is to be the largest in the world. The latter will probably be built on the Dartmouth side of Halifax harbour, and the work will begin this year.

The Royal Geographical Society has made a grant in aid of Sir Ernest Shackleton's proposed expedition to the South Pole. A feature of his plans which is of much interest, is the use of sledges driven by propellers like those of an airship, which are expected to carry the vehicle rapidly over the snowy plains.

The Russian government will send out an expedition to search for Lieutenant Sedoff, who set out from Russia in 1912 to reach the North Pole, and who was said to be using polar bears to draw his sledges.

At Lake Magadi, in British East Africa, there are soda deposits that cover an area of thirty square miles. A new factory and a railway ninety-five miles in length are expected to furnish for export one hundred and sixty tons a year, and the supply of raw material is almost inexhaustible.

The agreement between China and Russia respecting Outer Mongolia has not brought peace in Inner Mongolia. The Mongols are fighting for their grazing lands, and do not wish to be driven into the desert by the Chinese.

Australia is making greater use of wireless telegraphy than any other country in the world. It has twenty or thirty wireless stations, and there is no part of its twelve thousand miles of sea coast, it is said, that cannot be reached by wireless messages.

The latest change in the map of Africa is the amalgamation of Northern and Southern Nigeria into the single colony of Nigeria, which took place last month. The new colony has a population of about eighteen million.

An extension of the present railway across German East Africa will be opened up early this year to Lake Tanganyika. At the lake end the Germans are building a port, from which steamers will run to the Belgian Kongo. There another port is being constructed, as the terminus of a railway called the Great Lakes Railway, which in a few years will connect with other railways in the Belgian Kongo and with steamers on the Kongo River.

There are still some who believe that Dr. Cook was the first man to reach the North Pole; and it is possible that the Macmillan expedition, now in the Arctic regions, may

discover what Cook named Bradley Land and verify his description. The strongest argument in favour of Cook's claims is that his descriptions of conditions in the neighbourhood of the Pole were confirmed by Peary's descriptions. Cook has recently made very serious charges against Peary, and asked to have them investigated.

Captain Amundsen plans to sail from San Francisco on his north polar journey next June. It may fall to him to discover Cook's Bradley Land, or Peary's Crocker Land or both.

Nothing farther has been heard from the lost ship of the Stefansson expedition.

Yuan, President of the Chinese Republic, has dissolved his parliament, or what there was left of it. As a substitute, he has organized an administrative assembly of seventy-one members, chosen by himself and the provincial governors. Apparently he intends to rule as dictator, and the semblance of republican government is at an end. By a recent decree he has made Confucianism the state religion, at which the Mohammedans as well as the Christians of China will be displeased.

A revolt in Hayti was followed by the flight of the President of the Republic of Hayti and his prime minister, and by the landing of German and United States marines to protect foreign residents. There are two rival revolutionary armies in the field. One of them has suffered a defeat in an engagement with the other; and the victorious leader, General Zamor, has proclaimed himself President of the Republic.

A very important change in the Mexican situation has been brought about by a change in the attitude of the United States government. The embargo on arms entering Mexico from the United States has been raised. This will strengthen the hands of Carranza and Villa, the leaders of the insurrection in the north.

A military revolution in Peru, similar to that which placed Gen. Huerta in control in Mexico, has placed Auguste Durand, a former revolutionary leader, in possession of the seat of government. The President of Peru was made a prisoner, and the premier slain in the attack on the palace. A civil war may be expected to follow.

Prince William of Wied has been selected by the Powers as ruler of Albania, and has entered upon the duties of his office. Thus Albania becomes an independent principality, and is no longer a part of the Turkish Empire. It is also settled for the present that Greece is to hold certain islands occupied by her forces during the Balkan wars. But it is

too soon to say that the danger of another war is over; for Turkey has bought a large battleship from Brazil, and seems to be preparing for another war with Greece.

Money has been raised in France by popular subscription to build an aerial war fleet of two hundred or more aeroplanes. The fear of war is very real.

The Panama Canal is so near completion that a large ocean steamer could now pass through. States coastwise ships from Panama Canal tolls, as being in

President Wilson is opposed to the exemption of United violation of the Hay-Pauncefote treaty, which provided that the canal should be open to ships of all nations on equal terms. It remains to be seen whether the United States Congress will adopt his view of the matter.

SCHOOL AND COLLEGE.

The school estimates for 1914-15 in Halifax provide for a school nurse to follow up the work of the physician in medical inspection of school children. The nurse will begin her duties in May.

In other cities where medical inspection in schools has been adopted, the nurse's work has been found a true economy, not only controlling the spread of contagion and infection, but preventing the development of diseases and enabling children to remain at school when otherwise they would have lost time and missed promotion.

The short course at the Truro Agricultural College closed on January 16th. It was a remarkable session in point both of attendance and of interest. Three hundred and fifty-one men students were enrolled, and many women also attended the classes. Much enthusiasm was evinced at the convention of the Women's Institute on the 14th. By far the greater number of students were Nova Scotians, but fifteen went from New Brunswick, and returned full of praise for the facilities of the Truro College, and for the work of Principal Cumming and his staff.

The first Agricultural College for New Brunswick will open about the first of February at Woodstock, when the New Vocational School erected by the executors of the Fisher Estate, will be deeded to the Provincial Government. The Principal of the new College is Mr. Robert Newton, a graduate of MacDonald College, Ste. Anne de Bellevue, and lately on the staff of the Central Experimental Station at Ottawa. In addition to his work as Principal of the College, Mr. Newton will also act as advising specialist to the Provincial Department at Ottawa. The agricultural work will be carried on in the basement and the top floor of the new building. The Domestic Science department is to be in charge of Miss Marven of Sussex, a graduate of the Mount Allison School, and Miss Winifred Smith of St. Stephen has been appointed teacher of Manual Training.

The Board of School Trustees of Fredericton have decided to put up a new building in Smythe Street for a graded school, rather than a new High School building with provision for industrial training.

The Alumni Scholarship at the University of New Brunswick, \$50.00 a year, tenable for three years, has been won by Mr. Leo C. Kelley of Fredericton, now in his freshman year. The Wetmore Scholarship of \$50.00 was awarded to Mr. Earl Oulton, of Moncton, a junior at the University.

A delegation from the Women's Canadian Club of St. Stephen, N. B., has asked the School Board of that town to introduce the Kindergarten system in the public schools.

During the Christmas holidays a conference of educational authorities was held in Halifax for the purpose of revising the curriculum of the High Schools of Nova Scotia, so as to meet modern requirements. The committee will meet at Easter and draw up a report to be submitted some time before the Interprovincial Conference in Halifax next August.

Throughout January and February, Halifax Public Schools open at 9.30 a. m. instead of at nine

The University of Kings College, Windsor, N. S., has had a most successful and encouraging year. During the summer the college building was altered, repaired and improved, and its accommodations are now taxed to the full. Including the eighteen students at the Law School in St. John, the enrolment is now a total of ninety-four.

The pre-vocational school at Calgary has begun work with an attendance of thirty-nine boys and forty-six girls. This school is an experiment, but it is confidently hoped that it will succeed in keeping the children in school longer, and in turning them out better fitted for work, than the present schools are able to do.

THE MAGAZINES.

How the cause of Bird Conservation is being served by the art of the theatre is shown in the February number of the "Century," which prints an abridgment of Mr. Percy MacKay's Bird Masque called "Sanctuary," This Masque, which has already been performed in New Hampshire, and will shortly be produced in New York, is also to be given in London by the Royal Society for the Protection of Birds, to influence the impending plumage bill. The "Century" has a paper on "The Two Mona Lisas," discussing the historical question whether the Mona Lisa of the Louvre, or that of the Prado in Madrid is the older. A most interesting article on the theatre is contributed by the famous actor Forbes-Robertson, who in his turn is the subject of "An Appreciation" by Richard LeGallienne. Teachers and parents will find interest and instruction in "The Boy who goes Wrong." Some excellent short stories, and varied articles make up a particularly attractive number.

Walter Rackham continues his illustrations of Mother Goose in the January "St. Nicholas." The admirable "More than Conquerors" biographical sketch has the sculptor St. Gaudens for its subject. Black-on-Blue is a fascinating story for stamp collectors, and "The House-keeping Adventures of the Junior Blairs," will interest domestic science students and furnish them with new recipes. "The Runaway" has a good instalment, and our old friends of the "Rose Alba" appear as Christmas Waits. A hitherto unpublished letter of Miss Albott's fitly appears in this magazine, with which she was so long associated.

Two very good stories are now running through Littell's "Living Age." "The Promise of Arden" by Eric Parker, and "The Power House," a mystery story by John Buchan. This magazine gives a selection of articles on political, social and literary topics of a uniform high standard.

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THE EDUCATIONAL REVIEW,
St. John, N. B.

We present this month as our picture supplement a portrait of Lord Strathcona.

There will be no supplement in April, but with the May number there will be sent a special picture for Empire Day.

The members of the St. John High School Alumnae have in course of preparation a history of the St. John Grammar and High Schools. They have found considerable difficulty in collecting correct lists of classes, medallists, etc., as the reports of the graduation exercises were apparently not as fully recorded or reported by the daily papers as at the present time. Any information that any member of the classes of the Grammar or High Schools previous to 1890 and of the classes of 1896 and 1897, especially in regard to class lists or regarding medallists, can send to Miss Lawson, President H. S. Alumnae, 274 Tower Street, West St. John, will be of immense value to the compilers of the history. Reports of the St. John Board of School Trustees for the years 1890-1896 inclusive are particularly wanted.

One of the lecturers in the course on Household Economics, recently given at the Natural History Society rooms in St. John, presented with much force the claim of Domestic Science to be an educating subject, not merely leading to skill in certain household arts, but assisting in the all round development of the pupil. The too-popular idea that Manual Training and Domestic Science are intended solely to turn out carpenters and cooks, needs to be combatted, and we hope to publish some of Miss Bartlett's arguments in a future issue.

The following extract from a recent novel sets forth suggestively the influence upon mind and spirit of intelligent and honest manual work. The hero is learning bookbinding.

He learned here for the first time in his life the meaning of his hands, and discovered their use. They gave his soul a new and inexplicable pleasure. Regular manual occupation steadied him, drawing off his earth energies and leaving his spirit clearer. As he sat at the sewing-press, or mechanically pared the edges of leather for the covers of his books, he meditated. Busy hands and dreaming soul balanced each other, and he felt sane, alive, untrammelled. The symbolic rightness of quiet work justified to him the existence of his body, and sometimes allowed him a glimpse of the gateway which leads to the heaven of the industrious.

Behind labour, he felt, there was something — "a spirit or power which blessed."

BOTANY.

L. A. DEWOLFE.

The new seed catalogues are now arriving, and I trust teachers have them on their desks where they and their pupils can study them. One of the most fascinating parts of gardening is the reading of descriptions of new flowers and planning where you will put them when spring comes.

Things learned by experiment are well learned. It is more economical, however, to profit as largely as possible by other people's experience.

Always consider where the plants are grown that the seedsman offers for sale. Often, a certain plant is described in a New York or Philadelphia catalogue as hardy. In that climate it probably is. But, unless you are acquainted with it, you do not know whether it is hardy in the Maritime Provinces or not. Frequently, some one who believes the seed catalogue buys seeds of a greenhouse plant and expects them to do well in the garden. Through bitter disappointment he learns how tender they are.

Two of the easiest ways to avoid such losses are (1) always plant well-known flowers that you or your neighbor have already proved; or (2) read what others have done in testing new flowers. I advise following both methods. The first gives you little variety. The second will enable you to have almost anything you desire.

To assist you in making selections, it is wise to write to Publications Branch, Department of Agriculture, Ottawa, asking for Bulletin Number 47. This gives a list of trees and shrubs tested in the Prairie Provinces of Canada; and therefore will give you the hardiest shrubs in cultivation. Ask also for the Catalogue of Trees and Shrubs in the Arboretum at the Experimental Farm, Ottawa; and for the List of Perennial Herbaceous Plants at the same Farm.

These lists give you an excellent assortment to select from. Anything that is hardy at Ottawa is surely hardy in the Maritime Provinces.

Very often you may want a plant of a certain *genus*, but don't know which *species* is best. These lists will help you.

Aside from the question of hardiness, the size, color and habit of the plant are important. Some plants spread rapidly. In such cases a

very few plants now would give you an abundance in a few years. The Lilacs and Spireas are very satisfactory for this reason. Such plants are good for back-grounds where there is room to spread.

The proper grouping of colors is an important feature in a good garden. The time of flowering must be considered with this. Plants in the same bed or border *that bloom at the same time* should follow some good color scheme.

One does not want all the flowers to bloom at the same time; for after their blooming season is over there is a long time without any flowers. Select, therefore, early, medium and late blooming varieties.

It is needless to say that tall flowers should not come in front of short ones. Neither should tall ones, in general, be on the south side of short ones. Most plants need good sunlight. Arrange them, therefore, in such a way that they will not shade each other. *Clarkia* is a rather attractive flower that likes a moderately shady place.

The vegetable garden is also worthy of consideration. The catalogues describe new and improved varieties of nearly every vegetable and grain. An experimental school plot where these could be tested is a grand thing. One should not try the new varieties on a large scale, however, until the government or some experimental farm has tested them. It is cheaper for the government to do it than for the individual. Furthermore, the government is likely to do it more scientifically. Read government reports, and know what they are doing each year in this line.

Lengthen the growing season as much as possible by using hot-beds or cold-frames. Any book on gardening will tell you how to make and use them. Girls might be interested in growing tomatoes, onions, cucumbers and cauliflower; and, in the autumn, making pickles from their own garden products.

I have a quantity of circulars giving interesting experiments with fertilizers. These apply to flowerpots, boxes, or garden plots. I also have circulars on school gardening. Anyone interested in such work may have copies of these leaflets free by writing to me at Truro.

If any teachers have done or are doing any garden work, I should be interested in hearing

from them. Tell me how you liked it, how the children liked it and how the parents liked it. If any have questions relative to such work, send them along. If they are of general interest, I shall try to answer them through the REVIEW.

My wish now is that every teacher who has not a seed catalogue in her school get one. Encourage the children to study it. Get drawing exercises from it if you wish. Use it in every possible way. It will be the means of interesting some child in gardening. That is more important than interesting him in astronomical geography. It is also easier for the teacher.

NATURE STUDY OF ANIMALS.

H. G. PERRY.

The Beaver.

The beaver is our largest rodent, and one of our most interesting fur-bearers. He is a great worker, and his industry has become popularized in the phrase,—“Works like a beaver.” The beaver has also had a close connection with the early history of our country, and is a most fitting symbol of our nation.

But beavers are no longer plentiful. The ruthless havoc of trappers, Indian and white, in the days of Champlain and DeMonts, soon almost exterminated them. The broken mounds, and lines of earth works, now often found in clearings, stretching across the beds of former streams, or where even yet a brook may feebly trickle along, mark the sites of the once thronging life and the busy industry of beaver colonies.

Locate the sites of these old beaver-dams in your district. Study the location, picture the size of the pond. If you have not had a chance to visit a colony, read books on the subject, descriptions of their dams and houses, etc.; how they are built; the building materials, and how carried; and learn all you can about their food, habits, disposition, character, general appearance, and all other points of interest. Dr. Gilpin publishes an interesting paper, “On the Construction of a Beaver Dam,” in Vol. III., Page 152, of the “Proceedings of the Nova Scotian Institute of Natural Science;” also in Vol. V, we find by the same author,—“On the Dwellings of the Muskrat and Beaver in Nova Scotia.”

Though hard pressed in early days, scattered colonies remain today chiefly in the more remote parts. The formation of new colonies in forests is

often attended with loss to the lumber-man, both in the direct loss of trees cut by the beavers, and the killing out of trees by the water in the dam. What use does the beaver make of the trees he cuts?

In recent years several beaver colonies have moved over the national boundary line, from the State of Maine into New Brunswick, locating on brooks in Carleton and Victoria Counties. One such colony, in Carleton County, has settled on a brook near the site of an old beaver dam. The writer has had the pleasure of visiting this colony almost annually since its location, and every visit has shown progress from the beavers’ standpoint,—more trees cut, larger dam, more water, and more houses.

Have the enquiring mind, and you may learn much about these animals and their ways from lumbermen, trappers, hunters, guides, etc.; and at least make the site of one of the best preserved of the old beaver-dams in your vicinity the objective point for a spring outing.

The Porcupine.

The porcupine can hardly claim a place of honor among our fur-bearing animals; nevertheless, nature has been somewhat kind to him, for he is well connected, being a rodent.

The large loose quills which form the principal covering of his back and tail, while forming a good defensive armor, have hindered his development along many lines. His quills have been the passport on every path, he has been given wide room among his neighbors. Thus left practically to himself, he has failed to develop the bright, active, vivacious side of animal nature, but has remained slow and dull.

Why do dogs and other animals leave him so severely alone? Is this knowledge experimental or intuitional? The history of your dog will help you to settle this point. The old belief that the porcupine is able to shoot its quills is quite erroneous; they are given off only by contact, and the dog that gets his mouth full of them, you may be sure, was doing something more than merely looking on. Why do these quills “work in” if left in the muzzle parts of the dog? Examine the outer tip of one with a magnifying glass, and note the close retrose barbs along the side.

If you have a chance to examine a porcupine closely, note the character of the body covering on different parts. Select a series of the units from

the largest quills to the finest hairs. What does this teach you about the quills? With what are they homologous?

Examine the feet and note their shape and color. How does this color compare with the body color both dorsal and ventral, and with the color of the mouth parts, ears and tail? Note the claws. Are they sharp or dull?

The porcupine is often found climbing trees. Why? It can hardly be to escape his enemies, for other animals give him little concern. Standing trees and fire-wood often show portions with the bark gnawed away and ornamented with teeth marks. Here we have a hint as to his food, which consists mainly of bark and green leaves. As far as I have observed, he seems especially fond of the bark of the maple and the beech. Which maple is his choice? Note other trees on which he sometimes feeds.

Among lumbermen he is often called the quill-pig, and they consider his roasted flesh as good as young pork.

Rats and Mice.

We mention rats and mice as rodents that should be studied only with a view to extermination. They are among the worst enemies with which man has to deal, and are dangerous pests wherever found. The only use they seem to serve is that of providing some people with a paltry excuse for keeping cats.

The ordinary house mouse is a contribution from India, and like our rats, which are also foreign, they still have the travelling instinct. "They travel back and forth, crossing the ocean in all sorts of ships. They also travel across the continent on trains. Wherever our food is carried they go."—MRS. COMSTOCK.

Among our native mice, the white-footed or deer-mouse, and the meadow-mouse, are most commonly found.

The deer-mouse lives in woods, and around clearings. They are reddish brown above, with white below, being noted for their beautiful white-pink feet; even the underside of the tail is white. They have large ears and eyes, and a long tail. This is our prettiest mouse, and makes a good caged specimen. If you have several in one apartment feed them well, otherwise you will find some missing, for they are strongly cannibalistic. These mice are active in winter and are mainly responsible

for the mice tracks found in the snow. Note the arrangement of the tracks and the tail mark

The meadow-mouse is blackish in color, with a heavy body, short ears, and short legs and tail. This is the mouse that makes the runways or tunnels in the old grass and stubble under the snow. Look for the mouse-paths as the snow is going off. They tell us something about his winter life and habits. At times we find the meadow-mouse wintering in our dwellings, but he is more frequently found in barns, where he seems especially content if he is well supplied with grain. Here they nest, and breed even during the winter. Their nests with young are often found, the young being small, pink, hairless, blind little creatures, closely huddling together in the nest for warmth.

Look for the nest of the meadow-mouse in the fields. It is common during the haying season, often found torn and mangled by the raker. How does it compare with the nest in the barn? Of what does the house-mouse make his nest? The nest of the deer-mouse is sometimes formed from a deserted birds' nest, but more frequently it is built in old stumps, logs, hollow trees, or hay stacks.

Two kinds of rats have been reported in the Maritime Provinces,—the brown or Norway-rat, also called wharf-rat; and the black-rat. The latter is now very scarce, but in early colonial days was the only kind known. They have both been introduced from Europe, and their history in America illustrates very well the keen competition that often exists between even closely related species.

The black rat was first introduced into America about 1544. They multiplied and spread rapidly, and soon crowded out native species. How does this compare with the progress that the English Sparrow is making in America? These black-rats held the field till the introduction of the brown-rat about 1775, which in turn has practically exterminated the black-rat. Its fitness for the conditions of our country must be greater than those of the black species, and "the fittest survive."

Impress upon your pupils something of the great destruction to property by these small rodents, rats and mice. We quote some authorities on this subject:—"A single field-mouse devours in one year from twenty to thirty-six pounds of green vegetation, and a thousand mice in a meadow would require at least twelve tons annually. Damage is

done to meadows and pastures, to grains and forage, to garden crops, to small fruits, to nursery stock, to orchards, to forest trees, and to parks and lawns."—HEGNER.

The natural enemies of mice,—Owls, hawk, skunks, foxes, etc., perform a great service for man. How does man reward them? Such facts should be brought to the farmer's notice. The shooting of one owl or the trapping of a skunk may mean a ton less of crop, for, if man disturbs nature's balance, he must pay the price!

"The rat is the worst mammalian pest known to man. Its depredations throughout the world result in losses amounting to hundred of millions of dollars annually. But these losses, great as they are, are of less importance than the fact that rats carry from house to house and from seaport to seaport the germs of the dreaded plague."—LANTZ.

The amount of loss due to rats in the United States is not known; in Germany the loss is estimated at \$50,000,000 per year.—HEGNER.

Birds.

May I ask the readers of the "REVIEW" to kindly send me lists of winter birds found in their localities. We cannot emphasize too strongly the importance of bird study. It is often the door to the whole field of nature study. If you have not begun Nature Study in your school, or if you find it a drag, here is a stimulant, a real tonic, that will soon restore health and vigor. Begin at once to prepare lists, if not in process already. The interest you arouse will be a good index of your own enthusiasm.

Please report on postal cards. May I *insist on postal cards* as they are easily kept on file, and are more readily tabulated. If one card does not give you enough space send two, three, or more. Rule a card, the long way. (A card will readily give twenty lines for writing) In the top space, write:—"Report from." (Naming locality, County and Province, and date of sending;) on second line, write:—"Made by" (here give your name and school.) From the second line to the bottom of the card rule a line reserving a space to the left of about an inch and a half, head this space, on the third line, "Name of bird;" follow by two other cross lines making two columns about one inch each; head these:—"Dates seen," and "Numbers seen;" head the column to the right, which will be nearly two inches wide,— "Remarks." Fill in data and

send the cards to me, directed to Wolfville, N. S., mailing them not later than March 25th.

Keep also lists of spring migrants as they arrive, and report on cards by the 20th of each month. Rule the cards about the same as already directed. See the accompanying plan.

The plan for ruling and heading cards for reporting spring migrants has been adopted from "Bird Lore," and is as follows:—

Report from.		(Here name locality, County and Province, and give date of sending).			
Made by.		(Here give name, and name of school),			
Name of Bird.	Date first seen.	No. seen.	Date next seen.	No. seen.	Date of becoming common.
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I will tabulate results and publish in the April REVIEW.*

CENTENNIAL ANNIVERSARIES OF THE WAR OF 1812.

J. VROOM.

XX.—THE BATTLE OF LACOLLE MILL.

March 30.—In the middle of March, 1914, General Wilkinson began his last movement against Montreal, a movement which was to end in the final disaster of his inglorious military career.

Advancing along the shores of Lake Champlain, the route followed by Dearborn in 1812, and by Hampton in 1813, he crossed the Canadian boundary on the morning of the thirtieth of March. He had with him an army of about four thousand men. The British forces in Lower Canada were scattered, guarding different points. Their strongest position was on the Lacolle River, a branch of the Richelieu, where there was an old stone mill which had been converted into a fort. This improvised fort lay about eight miles north of the boundary line; and was held by not more than two hundred British regulars. The invaders, when they reached the place, after some delays and difficulties, sent six hundred men across the Lacolle, and attacked

* See Professor Perry's Notice of "The Bird Note Book," page 209 of this issue.

the mill from three sides; but their light artillery had little effect upon its strong stone walls. Reinforcements for the British arrived from two directions, and nearly doubled the number of the defenders; but still the enemy outnumbered them ten to one, or counting those actually engaged in the battle, more than two to one. The relieving parties took possession of a wooden blockhouse near the mill, but on the other side of the stream. Twice they charged the enemy's guns, but they were driven back. That they were able to hold the blockhouse was remarkable. As evening drew on, the firing ceased. The British strengthened their position during the night, expecting the attack to be renewed next day; but before morning came the invaders had disappeared. Without apparent reason, Wilkinson withdrew his army and retreated to Plattsburg; and a few days later he was relieved of his command. He was afterwards tried by court martial; but was acquitted on the ground that he had followed his instructions.

According to the testimony of their enemies, the conduct of the British troops on this occasion was distinguished by desperate bravery. The mismanagement and failure of the invasion would have been an event as notable as the failures of Dearborn and Hampton, had not another invasion, a few months later, crossed the frontier in the opposite direction to end in more lamentable failure. The affair at Lacolle Mill we may recall with pride, but Plattsburg has other associations.

Subscribers sometimes write to us "I do not understand the meaning of the number on the address label of my REVIEW."

Each issue of the paper bears its number in the upper right hand corner of the title page. The number of this issue, March, 1914, is 322. April will be number 323, and so on.

If your address label bears the number 322, your subscription is paid to April 1, 1914. If you have paid only to April 1, 1913, your number is (322-12) 310.

Every time you pay a year's subscription we add 12 to the number opposite your name in the mailing list, and the number on your address label is changed to correspond. If your number is 314, that is, if you have paid only to August 1, 1913, and you send us one dollar, we shall have much pleasure in changing the number to 326, signifying that you have paid to August 1, 1914.

MEDICAL INSPECTION OF SCHOOLS.

"The Public Health Journal" for February devotes a series of special articles to the great question of Medical Inspection of Schools. The editor, commenting upon the value of this work, says:—

"Still in its infancy, medical inspection of schools has demonstrated its worth and has shown what a valuable contribution it can be to the educational systems of Canada. Its establishment in some of our cities and towns is but the logical outcome of the desire to see the child-life of the community given the best possible chance for development. A child cannot learn unless he is healthy; a child cannot be happy unless he is healthy; the child as father of the man must be healthy or our whole nation will decay. A great host of the troubles flesh is heir to are preventable. There is no need for thousands of children being consigned to early graves, or stunted and deformed manhood. Medical inspection of schools, carried out properly, will show us the defects and what we ought to do to remedy them."

Dr. Struthers, Chief Medical Inspector in Toronto, contributes an interesting and full report of the medical inspection carried on in Toronto schools. "There is today," writes this experienced physician, "such persistent neglect of the laws of health, and outrageous violation of the laws of the human body, that there is plenty to do to teach even the most rudimentary truths, and to care for manifest physical defects and disease. It is not the children of the ignorant, the intemperate, the vicious, or the too-busy only who suffer from the parent's lack of knowledge. It is astounding to learn the extent of prejudice and superstition in regard to health matters among otherwise well-educated people."

The work of medical inspection was begun in the Toronto schools in 1910, and has rapidly increased in scope. Today, the total staff comprises a chief medical inspector on whole time in charge of the department; twenty-one medical inspectors on part time; one dental inspector and four dental surgeons on part time; one superintendent of nurses and thirty-seven school nurses on whole time. The city is divided into twenty districts with a medical inspector and two nurses in charge of each. The medical inspector and nurses of each district are expected to have an accurate knowledge of the prevalence of disease, sanitary conditions,

home environments and cleanliness, and the number of indigent families in their districts.

It should be noted that the progress and success of the work in Toronto owes much to the efforts of Mr. John Ross Robertson of the "Evening Telegram," to the Local Council of Women, and to the intelligent and sympathetic support of certain members of the School Board.

In Winnipeg, two medical inspectors, on part time, four nurses, and two clerks who do all the writing of notices and records, are employed. The inspectors receive \$1000 a year each. This city has also "A Little Nurses League," managed by a nurse who is on the permanent staff of teachers, and who holds classes during the summer, to instruct upper grade girls how to feed and care for children.

The Calgary Board of Education employs two doctors and a nurse. The doctors spend one-half of each school day in the schools. Their salaries are respectively \$125 and \$100 a month, and the nurse receives \$75 a month.

Regina, with a population of 45,000, has two nurses, on whole time, one drawing \$1300, the other \$1000, a year. "Little Mother's" Classes are held and in one school, a dental clinic.

In Saskatoon, there is a medical inspector, and two graduate nurses give their whole time to the schools, receiving salaries of \$1200 each. In six weeks these nurses visited 168 schools and fifty-eight homes.

The discussion on Medical Inspection of Schools at the meeting of the Canadian Public Health Association in Regina last year aroused interest in the West, and directly after this convention, Prince Albert, Sask., engaged a school nurse at a salary of \$1000.

Edmonton began this work in 1910, and now has a medical inspector on full time, with a salary of \$3500, and two nurses.

The East, so far, lags behind in this movement. But the Halifax School Board, as early as 1909, appointed two medical inspectors, who are now paid \$300 a year each, for part time service. A school nurse is being appointed, at a salary of \$600, and will begin her work in May.

In Truro, medical inspection of schools is carried on under the direction of the town's health officer.

Amherst owes her system to the public spirit of the medical men of the town, who, to demonstrate the need of and the benefits resulting from inspec-

tion of the schools, have given their services gratis since 1911. The school nurse who assists them, gives her whole time to this duty, and her salary is paid by a lady interested in the work.

Medical inspection aims at the prevention of disease and the correction of defects and deformity in the child, in order to develop strong and healthy men and women. While the end in view is the same, the methods in different cities vary with the needs of the communities, and the resources at the disposal of the workers. In most places, the inspector, either directly or through the school nurse, calls the attention of parents or guardians to any condition requiring medical attention. Great care is taken to avoid any embarrassment or offence to either child or parent. The school nurse gives attention to cases of uncleanness, skin eruptions, and insufficient clothing. The teaching of personal hygiene; tooth brush drills; nose-blowing drills; testing the eyes and fitting with glasses; securing treatment for neglected teeth, for diseased tonsils, and for adenoids, are branches of the valuable service of the school nurse, not only in the school, but in her visits to the homes. She has the cordial co-operation of both teachers and parents, and is a much-needed link between home and school.

The standard of health and cleanliness is being steadily raised. Already the dirty, unsanitary schoolroom is becoming a thing of the past. We are spending money freely on the ventilating, heating, and cleaning of our school buildings. To ensure that they shall be occupied by clean and healthy children, medical inspection seems to be the next necessity.

I have found by experiment that over feeding with starchy foods produces animals that are weak and irritable. And I see women, ignorant of the principles of diet, feeding their children with starchy foods, and producing the same results. We think it necessary to teach our men how to feed animals, but we expect our women to feed and care for babies by instinct.—J. W. ROBERTSON.

Home Rule for Ireland is the most important question to come before the British Parliament at its present session. The threats of a rebellion in Ulster if the Home Rule bill becomes law are less violent than they have been, yet it is not improbable that there will be some disturbances.

It is not what a thing costs that makes it great; the Good Samaritan spent twopence in doing the most famous deed of charity in all history.

NUMBER WORK IN PRIMARY GRADES.

GERTRUDE C. COUGHLIN.

The ideas on number work given in a recent REVIEW were very general. I shall now try to give more particular work.

Let us begin with grade one, and assume that the children are familiar with the numbers as far as 5. The next step is to teach combinations of these numbers, no result being greater than 5. Too much stress cannot be given to the teaching of combinations, and by that I do not mean to allow a pupil to count. He should have a picture of 4 as soon as he sees $1+3$; $2+2$; $0+4=4$; because he has been drilled on these. Tell him again and again that the only number in the world that he could put with 1 to get 4 is 3; also that if he was given a 3 the only number to put with 3 to give 4 is 1. He will be encouraged when he learns that he has only to learn $1+3=4$, $2+2=4$, $0+4=4$, and that he will then know the only numbers that will give 4 when added. Of course you will teach combinations to give 1, *e. g.* $0+1=1$; and 2, *e. g.* $1+1=2$, $0+2=2$; these being the only numbers that will give 1 and 2. Also those to give 3.

Be sure to have the pupil master the combinations of 2 before proceeding to 3. It seems to me that the neglect of this principle is what leads to the trouble later on when the child is introduced to arithmetic. Let me say right here, *never, never*, allow a child to count, either marks or on his fingers, because when he is allowed to do this, number work to him is simply counting, and he will never make any progress in arithmetic until he is broken of that habit.

When you are teaching combinations concretely, lead the pupil to see that 2 boys and 3 boys are 5 boys, that is have them think 2 and 3 give 5 and not $1+1+1+1+1$ give 5. Also lead them to see that if $2+3=5$, so $3+2=5$, because the latter is just the former read backwards. I used to tell the children it was the same as though we said their names backward; they would still mean the same person.

When combinations of the numbers up to 5 are learned, teach 6 and on up to 10, but teach addition combinations first. The following are examples on combination work:

$$2+0=2; 1+1=2.$$

$$2+1=3; 1+2=3; 0+3=3; 3+0=3.$$

$$3+1=4; 1+3=4; 2+2=4; 0+4=4; 4+0=4.$$

$$4+1=5; 1+4=5; 2+3=5; 3+2=5; 5+0=0+5=5.$$

$$5+1=6; 1+5=6; 4+2=6; 2+4=6; 3+3=6; 0+6=6+0=6.$$

$$6+1=1+6=7; 5+2=2+5=7; 4+3=3+4=7; 7+0=7+0=7.$$

$$7+1=1+7=8; 6+2=2+6=8; 5+3=3+5=8; 4+4=8; 0+8=8+0=8.$$

$$8+1=1+8=9; 7+2=2+7=9; 6+3=3+6=9; 5+4=4+5=9; 0+9=9+0=9.$$

$$9+1=1+9=10; 8+2=2+8=10; 7+3=3+7=10; 6+4=4+6=10; 5+5=10; 0+10=10.$$

This table is built up by degrees. Put the first combination on the board and have the pupil finish the line.

A subtraction combination table is built up on the same idea. Subtraction is more easily taught through the addition idea.

e. g. $1-1=0$; $2-1=1$, because you must put 1 with 1 to get 2.

$$2-1=1; 2-2=0.$$

$$3-1=2; 3-2=1; 3-3=0.$$

$$4-1=3; 4-3=1; 4-2=2; 4-4=0.$$

$$5-1=4; 5-4=1; 5-3=2; 5-2=3; 5-5=0, \text{ etc.}$$

Also a multiplication combination table.

$$e. g. 0 \times 2 = 0.$$

$$1 \times 2 = 2; 2 \times 1 = 2.$$

$$2 \times 2 = 4.$$

$$3 \times 2 = 6; 2 \times 3 = 6.$$

$$4 \times 2 = 8; 2 \times 4 = 8.$$

$$5 \times 2 = 10; 2 \times 5 = 10.$$

In teaching a multiplication table it is as necessary to teach 0×2 as to teach $3 \times 2 = 6$, the cipher is met with in multiplication as often as any numeral. The only multiplication combinations taught in Grade 1:

$$0 \times 3 = 0.$$

$$1 \times 3 = 3; 3 \times 1 = 3.$$

$$2 \times 3 = 6; 3 \times 2 = 6.$$

$$3 \times 3 = 9.$$

$$\text{And } 0 \times 4 = 0.$$

$$1 \times 4 = 4; 4 \times 1 = 4.$$

$$2 \times 4 = 8; 4 \times 2 = 8.$$

In the same manner teach the division table. Try teaching it through the multiplication combination: *e. g.* There are 3 2's in 6 because it takes 2 3's to give 6.

Practical work on tables. Fill in blanks.

- 1 boy has—eyes.
- 4 boys have—eyes.
- 3 boys have—eyes.
- 2 boys have—eyes.
- 1 stool has 3 legs.
- 3 stools have—legs.
- 2 stools have—legs.
- 1 table has 4 legs.
- 2 tables have—legs.

SECOND GRADE WORK.

Teaching new numbers. Teaching numbers from 10-20.

Teach 11, 12 and 13, through cards and calendars. When they learn that to place a 1, that stands for 10, before a 3, makes 13, then tell them that 10 added to 3-4-5-6-7-8-9 makes a teen, and the teen is named after the number before which the 1 is placed; if before 4, the result is 4-teen; if before 7 the result is 7-teen, and so on.

Here introduce combinations with 10.

- $10+1=11$; $1+10=11$.
- $10+2=12$; $2+10=12$.
- $10+3=13$; $3+10=13$.
- $10+4=14$; $4+10=14$; and so on until $10+10=20$ is reached.

Now we are ready for combinations of 11.
e. g.

- $10+1=11$; $1+10=11$.
- $9+2=11$; $2+9=11$.
- $8+3=11$; $3+8=11$.
- $7+4=11$; $4+7=11$.
- $6+5=11$; $5+6=11$; also of 12, 13, 14, on up to 20.

Second grade pupils will readily build subtraction tables from addition tables, because they have learned the principle in grade 1, *e. g.*, because $2+3=5$, $5-2=3$; $5-3=2$, so if $10+1=11$, $11-1=10$.

This is followed by teaching the numbers ending in 0. Teach that an 0 placed after any number makes a "ty." For instance place 0 after 2, the number is twenty; after 3, the number is thirty; after 5, the number is fifty.

Look at the first number, name it and place "ty" on the name and you have the name of the number. (*e. g.* $70=Seven\text{-}ty$; $90=Nine\text{-}ty$). The only exceptions are 20, 30 and 50, and

these must be taught separately; but the children will see how awkward it would be to say two-ty or five-ty.

Next the numbers between 20 and 30 are taught. Place 20 on the board. Pupil reads it, erase 0 and substitute the figure 1.

Teacher:—What number had we.

Pupil:—20. What number did I put in place of 0. Ans. 1. Then Bessie will read the new number, saying the number added. The child reads 21. They will soon become familiar with the twenties, and will read the thirties, forties, etc., when shown to them.

BUSY WORK ON NUMBERS.

How many pages in your reader?

How many lessons in your reader?

Write all the numbers ending in "0" up to 100.

Write the numbers ending in "2" as far as the fifties.

USEFUL BOOKS.

"The Bird Note Book, No. 1."

The Bird Note Book, No. 1, by Mrs. Anna Botsford Comstock, Assistant Professor of Nature-Study, Cornell University, with outline drawings by Louis Agassiz Fuertes, is an important addition to the bird-books available for school work. It is as its name indicates, primarily a "Bird Note Book," so arranged as to insure fairly uniform and independent work in even large classes. This valuable aid to this phase of Nature Study will find a ready welcome with all teachers and lovers of bird-study.

The book is in the letter-pad form, $5 \times 7\frac{1}{2}$ inches, 174 pages. The first part of it is devoted to notes, sets of questions on the birds under observation, with spaces for the student's answer; this is followed by sheets of drawing paper, on each of which the artist has placed his drawing in outline of one of our more common eastern birds. Thirty birds, all of which with few exceptions are found in the Maritime Provinces, are thus depicted in some characteristic position, and ready for color marking.

Publisher:—The Comstock Publishing Co., Cornell Heights, Ithaca, New York, Price, 30c. "Liberal discount allowed to schools using large numbers 12 — 25 and upwards."—H. G. P.

N. B.—This Note Book is to be followed about March 1st, by a No. 2, on the same plan. Price, 30c.

A MEMORY LESSON,

Miss Emerson explained that the youngest pupils had just been dismissed, and that "Memory Work" was the next lesson, carried on simultaneously in all the classes.

"Our object is to learn as many lines as possible in the forty-five minutes assigned to that work."

"But is not forty-five minutes a long period for one subject?" I asked.

"We do not find it so with Memory Work. In fact, at the children's request the time is sometimes extended to an hour."

The children were all studying quietly.

"And how do you occupy the time during their study period?"

"Well, you see I have a book of poems; I learn as many lines as I can during the period."

"Do you recite your lines aloud?"

"Yes, the children understand that I am a student with them; and that knowledge increases their interest."

For Memory Work, the school was divided into two classes. The senior class was learning "The Lady of the Lake," the junior class made a choice from Stevenson's "Child's Garden of Verses." Each pupil was allowed to learn his own selection.

"There is no rivalry among the pupils in this lesson; but each pupil is trying to learn today more lines than he learned yesterday."

"Do you explain nothing?"

"Only when a pupil asks the meaning of a word or of a peculiar expression. Sometimes I ask them the meaning of certain lines; if they cannot give the explanation, I drop the matter. Some pupil will probably ask the same question before the lesson ends. I have found it far better to stimulate curiosity than to take extra pains to satisfy a curiosity that is not yet ripe."

When the time arrived for recitation, each pupil, as called upon, told the number of lines learned; but that number was not always recited. It was evident that previous lessons had been accompanied by the most thorough drilling in proper methods of reciting poetry; for the children recited as they would talk — there was no "sing-song." They listened eagerly to one another, and even more eagerly when the teacher recited her selection, and made a hasty drawing on the board to illustrate its meaning.

"Now, we all learn one verse together in this way,"

said the teacher, as she drew aside the curtain and showed one verse neatly written on the board.

The children studied the verse carefully, raising hands when they were ready to recite. When five hands were raised, the teacher arranged the curtain so that it covered all but the first two words of each line:

The curfew —

The lowing —

The ploughman —

And leaves —

After four children had recited the verse, aided by the words in sight, the entire verse was hidden, and it was then repeated by several others.

At the close of the lesson, ten pupils were sent to the board and told to write any four lines of any selection they chose. This work was not corrected; but the teacher wrote "Correct" under the verses that had no mistakes. — *From H. F. Spinney in "The School."* — *Little Journeys to Rural Schools.*

SOME "DON'T'S" FOR LETTER WRITERS.

1. Don't end a letter with the words "and oblige," unless they are grammatically connected with the preceding sentence. *e. g.* Don't write, "Please send the books by mail. I enclose stamps for postage. And Oblige
yours truly,

Jane Smith."

But, "Please send the books by mail, and oblige
Yours truly,

Jane Smith."

2. Don't begin the words in the closing phrases with capitals. *e. g.*, not "Yours Truly" but "yours truly."

3. Don't write "enclose," when you mean "enclosed." *e. g.*, not "Enclose find five dollars" but "Enclosed find," etc. This is a very common mistake.

4. Don't be afraid of the pronoun "I," and write such phrases as, "Went to town on Wednesday. Saw Aunt Mary and did some shopping. Was very busy all last week. Hope your cold is better." This sounds awkward and ungracious.

Many Canadians are under the impression that we are spending more on education than other countries. This is a delusion. As a matter of fact, on a per capita basis, Canada stands low among civilized nations. — J. W. ROBERTSON.

FOR FRIDAY AFTERNOONS.

Pussy Willows.

The fairies were sleeping the long winter through;
But there came a March day, when the sky was so blue
And the sun was so warm that they lifted their heads
Then most of them wisely went back to their beds.

But the young fairies begged of the fairies more old,
"Oh please let us fly out! We don't mind the cold."
"Well put on your hoods then, awhile you may go,
But come just as soon as we call you below."

So every small fairy put on a grey hood,
And, oh, such good times as they had in the wood!
They went back, when called, to their beds and their
pillows
But they left their grey hoods hanging up on the willows.

—Selected.

The March Wind.

The bluff March wind came whirling along,
Before the peep of day,
He flew o'er the fields, and whistled a song,
As he dashed and danced on his way.
With a shout he tossed the lingering snow,
And the tiny brook set free.

He called to the sun, "Ho! Ho! Ho! Ho!"
What a merry March wind was he.

Then he dashed through the forest, and called to the trees,
"Wake up! 'tis time to arise."

He laughed at their cry, "We freeze, We freeze,
We must wait for warmer skies."

He blew the snow clouds from on high
As he sang aloud, in glee,

He whistled to all, "Good-bye, Good-bye."

Such a frolicsome wind was he.

—Selected.

The Wind.

I saw you toss the kites on high
And blow the birds about the sky;
And all around I heard you pass,
Like ladies' skirts across the grass—
O wind, a-blowing all day long!
O wind, that sings so loud a song!

I saw the different things you did,
But always you yourself you hid.
I felt you push, I heard you call,
I could not see yourself at all—
O wind, a-blowing all day long.
O wind, that sings so loud a song!

O you that are so strong and cold,
O blower, are you young or old?
Are you a beast of field and tree,
Or just a stronger child than me?
O wind, a-blowing all day long.
O wind, that sings so loud a song!

—Robert Louis Stevenson.

Why Cats Wash After Eating.

You may have noticed, little friends,
That cats don't wash their faces
Before they eat, as children do
In all good Christian places.

Well, years ago, a famous cat,
The pangs of hunger feeling,
Had chanced to catch a fine young mouse,
Who said, as he ceased squealing.

"All genteel folks their faces wash
Before they think of eating!"
And, wishing to be thought well bred,
Puss heeded his entreating.

But when she raised her paw to wash,
Chance for escape affording,
The sly young mouse said his good-bye,
Without respect to wording,

A feline council met that day,
And passed in solemn meeting,
A law forbidding any cat
To wash till after eating.

Pussy Willow.

"Oh! you pussy willow,
Pretty little thing,
Coming in the sunshine
Of the merry spring,
Tell me, tell me, pussy,
For I want to know,
Where it is you come from—
How it is you grow?"

"Now my little children,
If you look at me
And my little sisters,
I am sure you'll see
Tiny little houses,
Out of which we peep,
When we first are waking
From our winter's sleep.

"As the days grow milder,
Out we put our heads,
And we lightly move us
In our little beds;
And when warmer breezes
Of the springtime blow,
Then we little pussies
All to catkins grow."

—Selected.

Lady Moon.

How to tell her age)

O Lady Moon, your horns point toward the east
Shine, be increased;

O Lady Moon, your horns point toward the west
Wane, be at rest.

—CHRISTINA ROSSETTI.

The Wind.

Who has seen the wind ?
 Neither I nor you.
 But when the leaves hang trembling,
 The wind is passing through.
 Who has seen the wind ?
 Neither you nor I.
 But when the trees bow down their heads,
 The wind is passing by.

—Christina Rossetti.

THE QUESTION BOX.

S. J. B. asks to have the following questions answered:

1. Is an intransitive verb inflected for Voice?
 2. Give the mood of the verbs in the following sentence, with reasons: "If I (a) had been in his place I (b) would have paid the money."

3. Is it necessary to make two clauses of the following sentence in analyzing it: "He was across the street, but in the shade."

4. What is the difference between He is gone, and He has gone?

1. The passive voice in English is not formed by inflections; and strictly speaking, intransitive verbs have no passive voice.

2. (a). Subjunctive. A supposition contrary to fact.

(b). Subjunctive. Consequent clause after a supposition.

3. No, not necessary. We should consider it optional.

4. Both verbs are in the present perfect tense. But in saying, "He is gone" we think rather of his present condition; in "He has gone" of the act of going.

A correspondent asks for some facts about Agnes Maude Machar,* who is known also by her pseudonym "Fidelis." A brief sketch of this writer's life and work, with some extracts from her poems, will be found in the REVIEW for February, 1908. The collected edition of her poems is called "Lays of the True North and other Canadian Poems" and was published in Toronto in 1899, and 1902, and reviewed in the "Canadian Magazine" for December, 1899. It is hard to say which are her best or best known poems. "Canada to the Laureate" appeared in "Good Words" and called forth a cordial letter from Tennyson.

Some questions on Nova Scotia Literature texts will be furnished next month in response to a request from a subscriber.

* Pronounced Macker, with the stress on the first syllable.

EXCUSES.

"Roger, do you think that a good excuse for not doing something you ought to do, is as satisfactory as to have done the thing itself?" Mr. Brook asked his younger son, who had a fertile genius for "explanations."

"Why," said Roger, "one seems about the same as the other."

"Well," replied his father, "it will be a great step forward when you find out that they are totally *different* things! A good excuse for not having prepared your lesson at school may save you from punishment, but no excuse will put an atom of knowledge into your head. You may have an excellent excuse for having poor health, but no *good* health will be given in exchange for it."

"I never thought of it that way before," said Roger, looking thoughtful.

"Usually," continued his father, "excuses are only excuses. What we really *want* to do, we find a way to do. When you had your heart set on building a wireless station, you were particularly busy at school, and you were doing errands in the afternoon to earn money, so you had no time to spare. But you got up very cheerfully at sunrise for weeks to get the time you wanted." "It wasn't hard to do," said the boy.

"No, for you really *wanted* to do it," his father replied. Every one can instantly produce a perfectly good reason for not doing what he isn't keen to do."

"It's a very convenient faculty," said Roger, with a chuckle.

"It's not to be laughed about," answered his father. "It's one of the most dangerous capacities of human nature. If, whenever we left undone something that we ought to have done, we had to face squarely the fact of our own failure, there would not be half the evil there is in the world. But we blind our eyes to our own culpability; we even justify ourselves. We trifle with our moral sense, until our moral sense grows dull and blind, and we grow poorer and weaker—and we don't know it."

"I make no more excuses," said Roger, soberly.

"They are weak things to make to any one," replied his father, "but they are especially dangerous when we make them to ourselves."

—*Youth's Companion*.

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SPASMODIC SCOLDING.

Principal Creelman of Sydney, N. S., Academy, has a sound word to say to parents. The marks made in the quarterly examinations are published in the "Sydney Post," and in commenting on this report the Principal says: "The grumbling of a pedagogue does not make very fascinating reading. But this foreword is written for the parents of our Academy pupils, and to those parents especially whose boys and girls are not studying as they should. You'll not find these surnames in the following list *because they have not passed*. If you are encouraging and enthusiastic over school matters with your young person, it will do wonders. But a spasmodic scolding is worse than useless, as there always emerges from the curtain lecture the sullen specimen."

"The spasmodic scolding" when the marks come out is too often the only notice that parents take of their children's school work. Idle children learn to accept this as they would a thunder shower. It will soon be over, and then they may be as idle as they like again. The assurance of intelligent interest at home in every day's work exercises a steady pressure that pushes many a lazy child to diligence.

A level lot is 50 by 120 feet in extent. A cellar is dug on the lot 25 by 60 feet and 3 feet deep; the earth from the cellar is spread evenly over the lot. The walls of the basement are 8 feet high from the bottom of the excavation. How far above the new level of the lot is the top of the basement. Solve mentally

[Did you find the product of 50×120 , or of 25×60 , or both? It is not necessary to do so. Look for a simpler way.]—WESTERN TEACHER.

We smile at languages that, like the Russian, use few vowels in proportion to the number of consonants, yet there is a common English word that has seven consonants and only one vowel. What is it?

PRACTICAL EXAMPLES IN ARITHMETIC.

W. D. MILNER.

The regular work of the school-room will often present many opportunities to teach percentage in an effective way, and such problems are more likely to be interesting to the pupils than problems that are simply made up for the occasion and have no real meaning. For example: Many teachers give written spelling lessons. Suppose that on a certain day there are forty pupils present and ten papers are perfect. $\frac{10}{40}$ of the papers are correct; $\frac{10}{40} = \frac{1}{4}$, which is 25%.

The pupils ought to give the answer to an easy example like the above very quickly, but it seldom happens that the problems are presented in as simple form as the one given. More often the number of pupils present is thirty-seven or forty-three, or some other odd number, and the number of correct papers is sure to change constantly, so that the problems will present a great variety of combinations. For example: If there are thirty-seven pupils present and twenty-nine papers are correct, to find the per cent of correct papers: $\frac{29}{37}$ of the papers are correct. $\frac{29}{37} = 78\frac{1}{3}$ per cent.

After the pupils become familiar with this kind of work, the form may be changed by giving the number of incorrect papers and asking the class to find the per cent of incorrect papers. Then, when this, also, is familiar, another step may be introduced by giving the number present in the class, the number of incorrect papers, and asking the class to find the per cent of correct papers. This will require a little more thought. For example: Suppose that the number of pupils present is forty-two, and that eleven papers are incorrect, to find the per cent of the correct papers: $42 - 11 = 31$, the number of correct

papers. $\frac{31}{42}$ of the papers are correct. $\frac{31}{42} = 73+$ per cent.

Problems of this kind are also valuable because they are more like the problems that the pupils will have occasion to solve after they leave the school-room. One criticism that is sometimes made upon the work of the schools is that the pupils do "book work" and cannot apply this knowledge to everyday affairs. Just to see if there is any truth in this criticism by business men, let the teacher who has a class that has worked in percentage for some time, and that, in her judgment, understands percentage very thoroughly, ask her pupils to give the per cent of the class that have correct papers the next time she gives a spelling lesson. This, of course, without any preliminary drill or explanation. She will simply state the number present in the class, the number of correct papers and ask for the per cent. It is very possible that the result may be a surprise.

Another interesting series of problems may be made by finding the per cent of attendance for a half day. For example: Suppose that the number of pupils enrolled is thirty-five, and that thirty-three are present, to find the per cent of attendance. $\frac{33}{35}$ of the pupils are present. $\frac{33}{35} = 94+$ per cent.

The numbers will change constantly, and there will be a great variety of combinations. Then the teacher may give the number of pupils enrolled, the number absent, and ask for the per cent of attendance. For example: Suppose the enrollment is thirty-five, and three are absent, to find the per cent of attendance: $35 - 3 = 32$, the number present. $\frac{32}{35}$ of the pupils are present. $\frac{32}{35} = 91+$ per cent.

There is no reason why pupils cannot work out the monthly report for the school, the teacher giving the data. Such work would be of great practical benefit to the girls who may some time become teachers. With this kind of instruction they would not be completely stranded the first time that it was necessary for them to make out registers of their own.

Another class of problems may be made by finding the per cent of the school time that is devoted to recesses, and to the different studies. For illustration: Suppose a school is in session from 9 o'clock to 12 o'clock in the morning, and from 1.30 o'clock to 3.30 o'clock in the afternoon,

each day, making five hours in all. There is a recess of fifteen minutes in the morning and one of equal length in the afternoon. What per cent of the school time is devoted to recesses? The total time given to recesses is thirty minutes. The total time that the school is in session is five hours, which equals three hundred minutes. Therefore, the time given to recesses is $\frac{30}{300}$ of the whole time. $\frac{30}{300} = \frac{1}{10} = 10\%$.

There are many other problems connected with school work that will suggest themselves to the teacher. A few are given as illustrations. It is not expected that the examples given here will apply exactly to any school, but they will serve to show the kind of problems that are suggested.

1. There are forty weeks in the school year in a town, and in this time there are five holidays. What per cent of the whole time are holidays?

40 weeks = 200 days. 5 holidays are $\frac{5}{200}$ of the whole time. $\frac{5}{200} = \frac{1}{40} = 2\frac{1}{2}\%$.

2. There are fifty-two weeks in the year, and the schools are in session in a certain town for forty weeks in the year. What per cent of the time are the schools in session?

Ans. $76\frac{2}{3}\%$.

3. In a town there were fifteen hundred pupils in the schools, and one hundred and twenty are in the ninth grade. What per cent of the pupils are in the ninth grade?

Ans. 8% .

4. The morning session of a school begins at 9 o'clock and closes at 12 o'clock. There is a recess of fifteen minutes. What per cent of the whole time of the session is the recess?

Ans. $8\frac{1}{3}\%$.

5. The primary schools of a town are in session from nine o'clock to eleven o'clock in the morning, and a recess of fifteen minutes is given. What per cent of the time is taken by the recess?

Ans. $12\frac{1}{2}\%$.

—*Popular Educator*.

In Sweden, King Gustav and many of his people are calling for an increase in both army and navy, because they are afraid of Russian aggression. Warned by the fate of Finland, they believe that Russian rule would mean the loss of some of their most cherished liberties. The Ruthenians, on the contrary, who are virtually a Russian people under Austrian rule, are said to be plotting for the separation of their country from the Austro-Hungarian Empire and its annexation to Russia.

RURAL SCIENCE SCHOOL

TRURO, N. S.

The Rural Science School will open at Truro, Wednesday, 10 a. m., July 8, 1914, and will close Thursday evening, August 6.

Classes are open to teachers of Class A, B and C, who are recommended by the Normal College Faculty. Those of Class B and C, who are strongly recommended by an Inspector are also admitted.

Application for admission must be made before June 30. The Course of Study follows:

COURSE OF STUDY.

1. All Candidates for R. S. Diploma shall be required to complete satisfactorily the following courses: (a) Nature Study—1 hr. per week for 1 term, (b) Horticulture—3 hrs. per week for 1 term, (c) Biology—2 hrs. per week for 1 term, (c) Botany—6 hrs. per week for 2 terms.

2. Candidates shall elect as "majors" one subject from each of the groups A and B following:

A	Entomology.
	Chemistry.
B	Economic Zoology.
	Agriculture.

Each of the major courses elected shall involve as a minimum 6 hrs. per week class and laboratory work for two terms.

3. Candidates shall elect any two of the following as "minors," involving as a minimum two hours per week class and laboratory work for one term: (a) Bacteriology, (b) Brush and Cardboard Work, (c) Woodwork, (d) Mechanics, (e) Wether-work, (f) Geology and Soil Physics, (g) Birds, (h) Plant Diseases.

4. Work done in the Normal College in the following courses will be credited to the candidate for a Rural Science Diploma: (a) Brush and Cardboard Work, (b) Woodwork, (c) Wether-work.

Buy a single ticket and procure a Standard Certificate.

For further particulars see Journal of Education, October, 1913. For lists of boarding houses and similar information, apply to

E. W. CONNOLLY, REGISTRAR

CURRENT EVENTS.

The revolution in Peru has been successful for the time, and the deposed President has been exiled to Panama, but the Vice-president, Roberto Leguia, is on his way from England to Peru, intending to claim the Presidency by right of succession, and he will be opposed.

There has been much fighting in Equador, but with no decisive results, so far as known to the outer world.

Prince William of Wied has accepted the crown which was offered him, and is now King of Albania. His capital will be at Durazzo, on the coast. The boundaries of the new kingdom have been established, and quiet prevails among its recently warring factions, while the danger of a third Balkan war is lessened by the agreement which been reached between the Turks and the Greeks, respecting the control of the Aegean Islands.

Though the people of Mexico may not have fully realized it, a great change in the Mexican situation arose when Benton, a British subject, was killed by the northern rebels. Acting with and through the United States Government, the British Government demanded an investigation, and a joint British and American commission was appointed for the purpose. This commission is awaiting the result of an official inquiry that has been ordered by General Carranza, the nominal leader of the insurrection. There have been some small encounters between the insurgents and the Government forces within the last

month, in which the Government troops were victorious. It is again reported that the acting President, General Huerta, will resign the office and take the field against the rebels.

President Wilson, in a special message to Congress, has asked for a repeal of the Panama Canal tolls exemption in favor of United States coastwise shipping, against which Great Britain has protested. According to the British view, which is shared by President Wilson, the exemption was in violation of the provisions of the Hay-Pauncefote treaty, under which Great Britain waived her rights in a canal across the isthmus on condition that the canal when built should be open on equal terms to the ships of all nations. A bill for the repeal of the exemption has been introduced in Congress and will probably pass.

A very serious revolutionary disturbance is reported from Brazil, where trouble has long been brewing.

The King of Spain has signed a decree giving a large measure of Home Rule to Catalonia. The three Catalonian provinces lie in the north-east corner of Spain, and Barcelona is their chief city. Catalonia was once an independent principality. Its people differ in origin, dress and speech from those of the rest of Spain.

Since Mongolia has come under Russian influence, Great Britain will further extend her influence over Thibet. A conference of British, Chinese and Thibetan representatives has been in session at Delhi and is said to have

agreed that Thibet shall be wholly independent of China and that its government shall be supervised by representatives of the Indian Empire, which will place it in the same position as Afghanistan. The Dalai Lama, who fled to India for refuge from the Chinese, will now probably return to Thibet to rule the country under British protection.

The Russian system of local self-government, which after fifty years trial has proved so acceptable to the people of Russia in Europe, is to be extended to all parts of the Empire.

A sudden call to arms for the defence of South Africa, on Sunday, the eleventh of January, met with a quick response, and sixty thousand men were enrolled before the day was over. The danger was in the movements of certain labour leaders, some of whom had gone to South Africa for the purpose of raising an insurrection. Some of the leaders were deported. It was noticeable that the Hindu agitators who were seeking for better treatment for their own people as British subjects ceased their efforts when the labour trouble arose and quietly supported the government.

In some parts of Switzerland and Germany, churches are heated by electricity, and a similar heating system has recently been placed in a church in Norway.

Last year a steamer commanded by an Englishman and having Norwegian and Russian scientists on board, made a voyage from the north part of Norway to the mouth of the Yenisei, carrying profitable cargoes both ways. The eastward trip was made in twenty-two days and the return in ten days. The Yenisei is a navigable river and one of the great natural highways of Asia. This proof that its waters may be reached by steamers from the ports of Europe, though only for a month or two every year, is of much importance.

The reindeer herds established five years ago by Dr. Grenfell in Newfoundland and Labrador, have proved a great success.

A flash light to warn automobiles of a dangerous crossing is in use in England, and the idea commends itself for general use.

Among travellers' tales, in need of confirmation is the story that an English explorer has discovered on the upper waters of the Amazon, the ruins of three great cities which were abandoned thousands of years ago, the inhabitants of which had wonderful skill in architecture and used dishes and weapons made of an alloy of gold and silver. Ancient ruins have been long known to exist at places along the eastern slopes of the Andes and the newer story is not incredible.

The Belgian Government has ceded to Great Britain a strip of land in the Congo region, thus making it possible for the proposed Cape to Congo railway to traverse British territory throughout its entire length.

A treaty is being negotiated between Great Britain and the United States for the protection of migratory birds which pass from the United States to Canada and back at different seasons of the year. The treaty will also apply to birds that migrate from the British West Indies to the United States.

Letters have been received from Stefansson, confirming the report that the Karluk had been carried off in a storm. Nothing has yet been heard of the missing vessel.

Dr. Douglas Mawson has returned to Australia after two years work in the Antarctic regions. His expedition has been very successful and he and his companions have brought back large collections of biological and mineral specimens.

The war in Hayti continues, or there is another war in progress to determine which of the revolutionists shall rule. Zamor, who had defeated the former President, was elected by Congress to succeed him, but he finds it difficult to subdue the army of his rival, Theodore, the original leader of the revolt.

SCHOOL AND COLLEGE.

Toronto maintains special classes for backward children but besides these, the Toronto Mail and Empire pleads for a properly equipped provincial training school for mental defectives, of whom between 250 to 300 are officially reported as attending the public schools in that city.

Professor E. Brydone-Jack, professor of civil engineering, University Manitoba, has been elected member of the British Institute of Civil Engineers.

The Sydney, N. S., trade and labour council is urging the furnishing of free school books to the children in the city schools.

The school house at North Head, Grand Manan, was burned to the ground on the evening of Friday, February 13, and all the furniture and equipment of the four departments were destroyed. It is supposed that the fire caught from an over-heated stove. The loss is variously stated. The insurance was only partial.

The Regina Ministerial Association are urging upon the provincial government, that in addition to the Lord's Prayer, certain selections from the Bible, and hymns acceptable to all religious bodies be prescribed as part of the regular school exercises. The Premier promised prompt consideration of the request.

Mr. Vere Karsdale Mason, of Falkland Ridge, N. S., has been appointed Nova Scotia's Rhodes Scholar for 1914. Mr. Mason, who is a senior at Acadia University, will enter at Oxford next autumn.

The Hartland, N. B., Superior School has received from the Department of Agriculture, a prize of \$15 for the best kept school garden in Carleton County, for the year 1913.

Sir Henry Mill Pellatt, and Mr. J. H. Plummer, two prominent Canadians, have donated generous gifts to King's College. The former has endowed a chair in the University to be known as the Sir Henry Pellatt Chair of Philosophy. The endowment is \$1500 a year. Mr. Plummer, who is president of the Dominion Steel Company, has given a fellowship worth \$500 a year.

The distinguished botanist, Dr. W. Whitman Bailey, brother of Dr. L. W. Bailey of Fredericton, died recently at Providence, R. I. He was Professor Emeritus of Brown University, and well known through his contributions of papers upon nature subjects to well known periodicals.

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He held the honorary degree of L.L. D. from the University of New Brunswick, where he once acted as Professor of Chemistry and Natural Science.

Sir William McDonald has been unanimously chosen Chancellor of McGill University as successor to Lord Strathcona. Sir William has been a generous benefactor of McGill, some of his gifts being new engineering and medical buildings, and MacDonald College at Ste. Anne de Bellevue, where the work of the Faculty of Agriculture is carried on.

Miss Carrie Reynolds, who has taught with great success for the last three years on the staff of the Norton Superior School, has resigned her position. Her pupils presented her with several gifts, together with an address containing their testimony to the esteem she has won and their good wishes for her future. Miss Reynolds supervised the very creditable school garden at Norton.

The annual report of the Town Government of Amherst, N. S., for the year 1913, shows that Amherst people are zealous for their schools. The Evening Technical School reports an attendance of 157. The report of the School Nurse shows that she examined some 5000 pupils. Among the outstanding features in the school work of the year are the systematic teaching of the Palmer method of writing, and the time and pains giving to singing in the schools. Teaching of singing is now part of the daily work in every department.

Miss Esther I. Clark of Fredericton, N. B., has been awarded the 1905 scholarship at Acadia University. This

scholarship was founded by the class of 1905 for the Sophomore who made the highest average in the Freshman year.

By the will of the late Miss Mary Cramp, Acadia has received the sum of two thousand dollars. The amount is to be spent on the new library building.

RECENT BOOKS.

Professors Trent and Erskine of the University of Columbia, have published in a small volume, *the Poems of Wordsworth, Skelley and Keats* from Palgrave's Golden Treasury, with an introduction and notes. The introduction should be a great help to students and teachers of literature, consisting, as it does, of an essay on the lyric.

"The lyric" says the writer, "is essentially that literary type which expresses emotion, just as the drama and the novel express active experience and the essay expresses thought." [120 pages. Ginn & Co., 25 cents.]

Five of Tennyson's Idylls of the King are among the College Entrance Requirements for 1914-19 in the United States. They are the *Coming of Arthur, Gareth and Lynette, Lancelot and Elaine, The Holy Grail and the Passing of Arthur*. Dr. Willis Boughton, teacher of English in Erasmus Hall High School, New York, has prepared a convenient edition of these Idylls for Ginn & Company's Standard English Classes. The introduction contains in small compass, much useful matter on Tennyson's life and work, the Arthurian romances, and the verse of the Idylls. [185 pages. Ginn & Co., 30 cents].

An Anthology of English Verse, edited by A. J. Wyatt and S. E. Goggin, contains representative specimens of all that is best in English verse, exclusive of dramatic poetry, from Wyatt and Surrey down to the Victorian poets. Short critical biographies are prefixed to each group of selections from the several poets and a glossary contains also explanatory notes. [360 pages. University Tutorial Press., 2s. 6d.]

An attractive volume comes from Ginn & Co. with the title *Industrial Studies, Europe*. It is written by Nellie B. Allen of the State Normal School at Fitchburg, and intended to furnish to children from Grade V up, some interesting information of the life, and especially the industrial life, of European nations. The information is up to date and put in an interesting way, and the book would make an admirable geography reader, or in the teacher's hands, supply plenty of supplementary material for geography lessons. There are over one hundred and fifty illustrations and eight maps. Suggestions for topical study, follow each chapter. [409 pages. 80 cents. Ginn & Co.]

The University Tutorial Press, *First Stage Hygiene* is in its sixth edition. Written by an eminent physician who has been a school medical officer, it presents the subject as taught in his classes and contains many directions for simple experiments, sets of test questions and specimen examination papers.

The Canadian Almanac becomes increasingly useful and no office or library which has once used it for reference would willingly do without it. The 1914 issue contains a coloured map of British Columbia, showing all the railways and principal towns, as well as the physical features. The book has full information about educational institutions, Dominion and Provincial Governments, complete revised list of post offices and many other lists invaluable for reference. [520 pages, cloth \$1.00. The Copp Clark Company, Toronto].

RECENT MAGAZINES.

The *Canadian Magazine* for March contains an attractive list of contributions, perhaps the most important of which is the full text of a speech delivered by the Honourable Elihu Root in the United States Senate in favour of the British contention regarding the equal imposition of tolls on the Panama Canal. This speech gives a complete review of the negotiations that led to the building of the canal, and as the attitude of the United States Congress is likely to become more than ever a subject for international discussion this contribution to The Canadian should be widely read. There are as well articles by Wilfred Campbell, Mrs. Arthur Murphy, Frank Yeigh, Harold Sands, Mrs. Forsyth Grant, Main Johnson, W. C. Gaynor, Phil Ives, Margaret Bell, Lindsay Crawford, Francis A. Carman and others.

The March *Century* is a good number. Fiction includes not less than nine short stories, among them "The World Set Free," a prophetic tale by H. G. Wells, "The Education of Popo," a story of a young Mexican's first love,

by Maria Christina Nena, and an unusual story, "The Quality of Genius" by Katharine Holland Brown.

The frontispiece is a reproduction in full colors of a printing by George Inness, Jr., "Surely This Man was The Son of God," which is a novel though reverent conception of the Crucifixion. There are four pages of the work of John S. Sargent and eight pages of Leon Bakst, the eccentric Russian colorist.

The non-fiction features of the number include "What Have Women Done With the Vote?" by George Creel. "The Golden Temple of Amritsar," an artistic piece of description by E. F. Benson, "Origins of the American People," a suggestive paper by Professor Edward A. Ross, whose series on Immigration is making a profound impression; "The Next Step in Prison Reform," a timely paper by Richard Barry, "What about Russia" by James Davenport Whelpley, touching upon the present situation between the United States and her old friend, Russia, "Dublin," an article full of interest by Brand Whitlock, Minister to Belgium.

HEATON'S ANNUAL, THE COMMERCIAL HANDBOOK OF CANADA, Heaton's Agency, Toronto. Price \$1.00. Postage 12 cents. The 1914 edition of Heaton's Annual has come to hand. The first edition was compiled in 1904 for the Department of Commerce of the Dominion Government, to meet the requirements of British firms doing business with Canada, and 15,000 copies were purchased and distributed by the Government in Great Britain and Continental Europe.

The second half of the book contains a concise, up to date description of all the towns in Canada of any commercial importance, including the leading hotels in order of merit, the existing industries and special opportunities for new industries. To this is added a section covering such subjects as agriculture, fur-farming, commerce, education, finance, fisheries, forests, immigration, mining, population, professions, railways, game laws, water powers, etc., and admirable, up to date pocket encyclopedia of the resources of the Dominion.

This section is especially valuable for use in teaching the geography of the Dominion and we recommend the book for the school library and the teacher's desk.

DO YOU KNOW CANADA? A novel and unique mine of information is found in the popular booklet, 5,000 Facts About Canada, just issued for 1914, and compiled by Frank Yeigh, the well-known statistical authority on things Canadian. This new edition shows a marked advance over previous issues in an increase of new data, a handsome cover, a revised map, and improved paper. The publication contains all the essential facts of Canada's progress in a year, under such chapter heads as Agriculture, Area, Banking, Census, Mining, Manufacturing, Trade, etc., while striking tables of comparisons present a measuring rod of our national development. Its wide circulation is easily understood when its value is realized, for it presents the Dominion in a nutshell, a ready reference encyclopedia of facts and figures. It may be had by sending 25 cents to The Canadian Facts Publishing Co., 588 Huron St., Toronto, or from news dealers.

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The ORILLIA, ONT. PACKET has the following kind words for us:—

That excellent periodical, the EDUCATIONAL REVIEW, of St. John, N. B., made its first appearance in 1914 with a new, bright and appropriate title page. The REVIEW sustains the high character attained under its founder, the late Dr. G. U. Hay. We are pleased to learn, from a private source that this Eastern periodical is gaining a considerable circulation among educationists in the Canadian West. Long may it continue to grow.

The longest overland mail trip in the world is that which four employees of the Hudson Bay Company are now making. With two dog teams, each of which drew three hundred pounds' weight of mail and provisions, they left Edmonton, in Alberta, Western Canada, early in December, for Fort McPherson, on the Arctic Ocean, near the Alaska boundary. It is hoped that they will reach their destination, 2,000 miles away, by the end of February. In the mail they carry is a packet for Mr. Stefansson, the Arctic explorer, to be delivered at Herschel Island.

Dr. Robertson would have some sympathy with the English schoolboy, who wrote: "Much butter is imported from Denmark, because Danish cows have greater enterprise and more technical education than ours."—ORILLIA PACKET.

Self-government with tenderness—here you have the condition of all authority over children. The child must discover in us no passion, no weakness of which he can make use. The child who can rouse in us anger or impatience or excitement feels himself stronger than we, and a child only respects strength.

—Amiel's Journal.

At vespertide
One virtuous and pure in heart did pray:
"Since none I wronged in deed or word
today,
From whom should I ask pardon!
Master, say."
A voice replied;
"From the sad child whose joy thou hast
not planned;
The goaded beast whose friend thou did'st
not stand;
The rose that died for lack of water from
thy hand."

The child sees what we are behind what we wish to be.

—Amiel's Journal.

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If a subscriber wishes the paper to be discontinued at the expiration of the subscription, notice to that effect should be sent. Otherwise it is assumed that a continuance of the subscription is desired. It is important that subscribers attend to this in order that loss and misunderstanding may be avoided.

The number accompanying each address tells to what date the subscription is paid. Thus "324" shows that the subscription is paid to April 1, 1914.

Address all correspondence to

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St. John, N. B.

We thank very heartily all those subscribers who have taken the trouble to express their appreciation of the help they receive from the REVIEW, and especially those who have asked for, or suggested, articles that they think will be useful. We shall be glad to receive many

more letters of this kind, and the more definite and detailed they are the better.

We have had several requests for notes on High School Literature, and the papers on the subject in this number will be continued in May and June.

The attention of our readers is directed to the special offer that the REVIEW makes to new subscribers in our advertising columns.

If you are already a subscriber, draw the attention of those who are not to this chance to get the May and June numbers free.

As the spring comes on, Nature Study claims attention. Teachers and children alike grow restless and long for a change. Now is the time to interest yourself and your classes in the stirring of life and growth around us. "The spring comes slowly up this way," and there is time to study her progression.

Professor Perry's studies of birds offer a chance for co-operative work, and we hope that many will respond to his request and send him reports. Take advantage of the offer of the Audubon Society, printed in another column.

And do you realize what prompt and practical help you may have for the asking, from the Natural History Society of New Brunswick. If a child brings in a specimen, plant, bird, or insect that you cannot name, send it to the Natural History Museum in St. John, and it will be identified for you. If you want to give a lesson on this, or any nature study subject, you will be furnished with lesson notes. The Society has already at hand a set of lessons on common birds, insects and plants, and new ones will be prepared upon request. The Provincial Government works with the Society in this matter, and it is much to be desired that teachers should take advantage of such a generous offer. Address all communications to Mr. William McIntosh, Curator Natural History Museum, St. John.

CENTENNIAL ANNIVERSARIES OF THE WAR OF 1812.

J. VROOM.

XXI.—The Capture of Oswego.

May 6.—When the lakes were again clear of ice, in the spring of 1814, Sir James Yeo had two new vessels added to his fleet. They were large frigates, which had been built at Kingston. With these and his other six ships, he had a decided superiority over Chauncey.

Yeo's fleet left Kingston on the third of May, having on board over a thousand men commanded by General Drummond. This force was sufficient for the reduction of Oswego, though it was not large enough to justify an attack on Sackett's Harbour. The capture of either place was supposed to be worth the effort. The greater part of Chauncey's fleet was at Sackett's Harbour; Oswego was an important depot for naval stores.

Oswego was not strongly garrisoned at the time, but was defended by a fort, which stood in a commanding position on high ground, and by an armed vessel which lay in the mouth of the river.

The ships reached the place on the fifth, and sent out boats to draw the fire of the batteries. An attack in force was to have been made at eight o'clock in the evening; but a heavy gale from the north compelled them to keep off shore until next morning. This delay allowed the defenders to carry away some part of their stores, and to sink their armed vessel, with the seven heavy guns which she carried, hoping in that way to save her from being taken by the British.

On the morning of the sixth, the storm having abated, the British fleet returned to the attack. Men were landed under a heavy fire from the fort. A part of the defenders, however, had already begun their retreat; and, in ten minutes from the time when the attacking party reached the top of the hill, the fort surrendered. Its guns were destroyed, the barracks burned, the sunken vessel raised and carried off, with her guns on board, and a large quantity of ammunition and provisions seized. The fleet returned to Kingston with the spoils. Sir James Yeo then sailed for Sackett's Harbour, where he arrived on the nineteenth, and began a strict blockade.

While the capture of Oswego was creditable to the British and Canadian troops engaged, especially to the Glengarries, whose conduct on the occasion added to their renown, yet it was of no great importance in its results. Its chief object was to check the supply of guns and ammunition for Chauncey's fleet; but the guns and naval stores which Chauncey needed reached him by another route, and before long he was again able to challenge the supremacy of the British fleet on Lake Ontario. Had he followed up his advantage when the time for action came, the battle of Lundy's Lane might have had a different ending—but that is another story.

A TALK ON WRITING.

ELIZABETH WILSON.

This article is not intended to set forth any new or complete system of writing, but I have been asked to tell you something of my methods of teaching this subject, and I do so, hoping that what I have found useful in my own school-room may in some way help you.

This paper deals entirely with slant writing, and where the words, "straight lines," are used, *of the required slant*, is always understood.

I believe we are all striving to obtain the forearm muscular movement, and when we succeed in getting a good position of the body, and the proper pen-holding, we are more than half way to the goal.

POSITION.—The writing position must be a natural one in order to be untiring, and I'll outline here, as clearly as I can, what I find to be very good. Sit well back in the chair, with body erect, soles of the shoes flat on the floor, and arms hanging straight from the shoulders; bend forward slightly from the hips, but do not lean against the desk; raise the arms over desk, elbows out, and drop them naturally; raise right arm, and bend forearm at right angles with upper arm, and drop again.

HOW TO HOLD THE PEN.—The next part concerns the pen holding. Hold the pen lightly, using the thumb and first two fingers. Straighten out the first finger, and press the pen against the side of the second finger, opposite the nail. The pen-point should project an inch, or a little more, beyond the end of the first finger, and the pen-holder should cross the hand just back of the

knuckle of the first finger. The third and fourth fingers must be kept together, and curved so the hand can rest and slide on the first joint, or end of the little finger, according to its length. The pen-holder should point at the right shoulder, but we often find it pointing at the ceiling, or across the room, and the child trying to write with the hand so cramped that a white streak appears along the lower joint of the first finger. To call attention to this, I sometimes ask the children if they think I am going to take their pens. Some such reminder is all that is necessary to correct the position when once the proper way has been learned. The right arm must rest only on the muscles just below the elbow, and on the little finger. The left hand is kept on the desk to hold and move the paper.

MOVEMENT.—With this position of body and pen, move the arm on desk, as if writing, until you get a uniform movement of arm, hand, and fingers. Let the children see that the little finger must write the letters just as the pen does. I usually illustrate here by writing on a black-board, dusty enough to show clearly the trace of my little finger, or by placing a small piece of chalk between the third and fourth fingers, so as to trace their movements on the board. At first, I usually find a tendency in the class to keep the little fingers rigid, and to help to overcome this difficulty, I have each pupil write several words, paying attention only to the writing of the little finger, while the pen does the tracing. This may not be a very important exercise, but it encourages the little fingers to move.

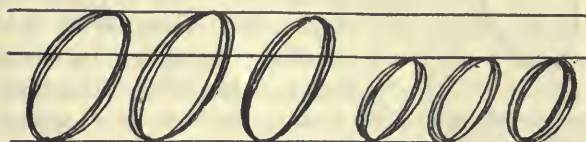
Many good movement exercises can be brought into use. Take the oval first. Roll the arm around on the muscle, making the little finger slide in an oval two-thirds as wide as it is long. Touch the pen-point lightly to the paper, and make about seven revolutions to an oval. If you start this exercise with large ovals, covering three spaces of ordinary-lined paper, you will find that they cannot be made with the finger movement, and the child is obliged to use the forearm muscular movement.

When the child has the position and form in mind, it is a good plan for the teacher to count aloud, neither very fast nor very slow, while the class make the revolutions. Counting is a means of securing uniformity of movement, of

keeping the class together, and giving an idea as to how fast to practise, and I find it always creates more interest and enthusiasm in the work. Tapping on a book-cover with a pencil answers the same purpose.

After three-space ovals, try two-space, and then one. Make rows of these across the paper,

1.



and when they are well done start again, but instead of retracing the ovals show the class how to work steadily forward as in illustration:

2.



Practise both the direct oval, and the reversed oval, for here we are laying the foundation for the capital letters.

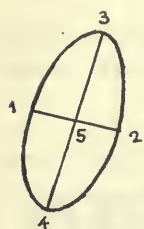
The letters O, C, A, E, D, are made from the direct oval. L, T, F, P, B, R, S, G, are made from the capital stem, and the remaining thirteen are made from the reversed oval. (See diagrams in New Brunswick Copy Books, Inside Cover).

UNIFORMITY OF SLANT.—Uniformity of slant is absolutely necessary for plain writing. Keep all lines straight and parallel, by drawing them all towards the body. Be careful to see that each child starts with, say a one space straight line. Then count to fifteen or twenty, while the children make the strokes, and the slant of the last line will usually surprise the young writer.

A part of each writing period can profitably be spent in such exercises as these and we often practise them for a few minutes before a written exercise in grammar or history. Several good ones are to be found in the back of the Prescribed Writing Book, and the order in which these are used will depend upon the letter to be taught.

COMBINATIONS OF STRAIGHT LINES AND CURVES.—The elements of writing—the curve

to the right, the curve to the left, and the straight line, are all taken from the ellipse and its diameters. The curves are often modified, as we shall see when we make the letters.



3 Draw an oval on the board, and number its parts. Let the children point out the curves on the drawing, and spend some time in practising them, and along with this, practise the upper turn and lower turn both separately

and combined. By looking over the small letters, it is readily seen, that they are nearly all made by attaching curves of some sort to straight lines. It is well to remember that all curves are joined to the straight lines of short letters, one-fourth of the length of line from top or bottom.

I shall not attempt to go through the whole alphabet, but shall mention only a few points that I have found helpful in teaching the form of some of the letters. Look at the oval on



4 the board. Draw a straight line from 2 parallel to 5-4, attach a curve to the right, similar to 4-2; place a dot above and we have an "i." Now to make this letter again, draw a straight line

on the board about six inches long, divide into quarters and add the curves. The dot, above the "i," should lie in the straight line produced. Have the children write this letter several times on their practice paper, and then go on, to the other short letters made from the straight line and the curves. The u, v, w, n, m, r, s, x, all follow naturally. The o, a, c, e, are made from the small oval. The stem letters are easily taught here. Build them up from the i, a, and v, or x; notice the length of each letter and the curves; make each one separately; reduce them to short letters, and see how they compare with the ones already taught. To make the loop letters take the i; produce the straight line upward (our writing system requires three times its original length); attach a modified curve to the right, and you have an l. By producing the straight line of the i, either up or down and then adding curves, you can easily make all the loop letters. If these are made in ruled spaces, the class can see at once, that the straight line

and curved line always cross on the space lines which enclose the short letters.

Practise writing short words of various combinations, as soon as sufficient letters have been formed correctly. Call attention to the fact that all turns on the base-line should be alike, and teach the children to train the eye to write without guide lines.

LESSON PLANS.—My school is usually made up of children from ten to twelve years of age. When I get a new class, I have each pupil write three or four lines on the first page of the writing book. While they are doing this, I look out for position of body and pen, movement, form, and other details. This shows me where to begin, and on what part of the work to spend the most time.

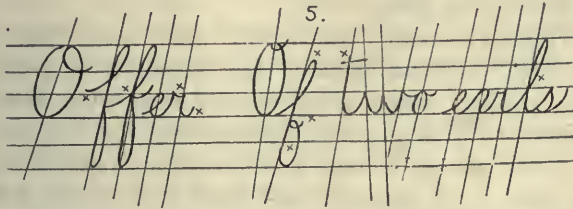
We start with the position of body, and the pen holding, and spend a few minutes in muscular movement exercises, making the oval, slanting lines, and loops, as these all come into use on page one of the copy book. Each child keeps a sheet of tablet paper in the writing book for practise work. In this part of the lesson, I sometimes allow the pupils to count aloud with me. It adds to the interest and takes nothing from the results. Before leaving these exercises we make the capital O from the oval, the required stem letters from the slanting lines, and the required loop letters from the loop exercise.

Then we talk about the short letters in the copy; illustrate on the board, and practise on paper. We compare the height of the capitals, stem, and loop letters, and by this time I usually find two-thirds, or more, of the class anxious to write another line in their books. When it is written the improvement is made evident by the satisfaction expressed on the faces.

As I walk about the room looking at these lines, I get the different pupils to point out where the last line is better than the others, and where they can yet see mistakes. I show the class again, on the board, how to correct them, and another line is written in the books.

During the writing lesson, I ask, say five pupils to write on the board in spaces already prepared, while the others practise on their paper. This work is done with the understanding that it is to be criticised by the class (with no mention of names but always by the numbers above the lines). It is surprising to see just how much they can find wrong with this writing. Then we have a few lines written

without spaces, and draw the spaces afterwards to show how even or uneven they are as the case may be. When we are practising a new capital letter, I sometimes have the class



go in order to the board, and have each pupil make the capital. We number these and discuss them, and before we correct them some one is ready to say, "Numbers 3, and 15, or whatever the case may be, are the best," and the owners of these numbers are quite ready to beam their thanks.

When a page in the writing book is all complete but the last two lines, we stop writing, and exchange books. Then each one does his very best to write a good line in the borrowed book. When the books are returned to the owners, the writing is well looked over; and when I ask, "How many have a line written better than your own." "One just about the same?" and, "One not so good?" the show of hands tells me at once just what they think of it. On the last line each pupil writes his own name and the date, and we are ready for something new. When several pages have been written, we take a few minutes to turn back the leaves, and compare the writing on the different pages, and there are always cases where the improvement is so apparent that no words of encouragement are needed.

On some of the written exercises that we exchange and mark in class, I allow the pupils to say what they think of the writing. Good, Fair, or Poor, is written below the owner's name before it is returned, and I nearly always find that the criticism is a just one.

Another exercise I find beneficial is the writing of passages from the reader, without the aid of the writing book. I always consider this one of the best tests, for after all it is not the copy-book writing, but the every day exercise that counts. In marking these exercises, I take into consideration the neatness, effort, and improvement, as well as the form and movement. All through the grades, I think the pupils' attention should be called to the writing position of the body, the pen holding, and the uniformity of slant.

QUESTIONS ON LAYS OF ANCIENT ROME.

1. Who is supposed to be speaking in these poems? What is their supposed date? Quote verses or phrases from the Lays that bear out this illusion. Give instances of "illiberal sneers at the Greeks," "furious party spirit," "contempt for arts of peace," etc., spoken of by Macaulay in his introduction. Is the story of Horatius as told here, true to history?

2. What Roman virtues are emphasized in the Lays? What can we learn from them of Roman occupations, dress, methods of warfare, religion, of the streets and buildings of Rome, social and political divisions, relations with other countries, ways of reckoning time?

3. Write a verse from *Horatius* showing the normal metre; and another where the metre varies. What is the metre of *Virginia*? Write any verse that seems to you particularly fine. Illustrate Macaulay's use of repetition, of proper names, of metaphor. How does he impress upon us the greatness of the throng that poured into Rome for safety from Lars Porsena?

4. Give examples of moralising on the part of the poet. Does he think the present time or the past is greater? Does he dwell upon the beauty of his land? Support your answers by quotations?

5. Who or what, were the following: The fleetest steed from Aufidus to Po; the proudest town of all; the sweetest maid in Rome; (give other instances of description by superlatives), the man of seventy fights; the priest who slew the slayer; the great Thunder Cape; the accursed race; the wicked Ten; Rome's whitest day; the she-wolf's litter?

6. What answer did Aulus give to the message from the Thirty Cities? What prayer are Romans told to make when they see the hoof-mark in the flint? What were the "words of doom" spoken by "ancient Camers"? What reward was set upon the head of Virginius? How did the Romans reward Horatius?

7. For what occasion was each of the last three Lays written? What is meant by a "Lay"? Name some other famous Lays. With what subject do they all deal? Did Macaulay write any others? Any other poems of any kind? What are his other writings?

[An excellent set of questions on the High School Prose Book may be found in the REVIEW for June 1913.]

BOTANY.

L. A. DEWOLFE.

Among questions recently asked, several are of sufficient general interest to be answered in the REVIEW. I shall answer two or three.

WHAT IS THE BEST KIND OF HEDGE TO PLANT?—I don't know that there is any best. Among the best are Barberry, Privet, Hawthorn, Spruce, etc. The kind to select depends somewhat on where it is to be planted, and how high it is to grow. Personally, I am fond of Barberry. The purple-leaved barberry (*Berberis purpurea*) is very attractive. It is hardy; and on account of its spines, it is not likely to be eaten by stray cattle. Other spiny or thorny hedges are the English Hawthorn, and the Buckthorn. These are good where any danger from cattle exists.

Rosa rugosa, the Japanese single rose, is also excellent for a hedge in similar situations. It is thorny, and grows high enough to hide the fence.

In front of a house where a low hedge is desired, the Japanese barberry is good. It needs little trimming. The common barberry is also easily kept low. The red berries on these hedges, if they are not pruned too severely, are attractive in the early winter.

The California Privet makes a very pretty foliage hedge, holding its leaves until about Christmas. If the winter is very cold, however, it is liable to winter-kill. Even so, the roots are not killed; and, if cut off near the surface of the ground, the hedge will quickly come up again.

The English Privet is somewhat hardier than the California Privet. To my mind, however, it is not quite so pretty. Either, at any rate, is well worth a trial.

If one prefers a showy flowering hedge, probably the best is the Bridal Wreath (*Spirea Van Houttei*). It grows very quickly, making a creditable hedge the second year. If properly pruned, it sends up numerous shoots from the root, thereby forming a thick hedge. If untrimmed, it grows to a height of about six feet.

Lilac also makes an attractive hedge, where it is not cut too low. The shrub is so well known that no comment is necessary.

For an evergreen hedge, where one wants a certain amount of seclusion, none is better than the spruce. Norway spruce will grow somewhat faster than our native spruces. Such a hedge is good as a wind-break on the exposed side of

a lot. Spruce, however, is more likely to die than the other hedges named. When it is successfully established, it is certainly good; but for every good spruce hedge, one will find a dozen poor ones.

Hemlock, cedar, and white pine make pretty hedges; but, like spruce, they are hard to grow. The conifers cannot stand having their roots dried nearly so well as can the other trees and shrubs.

After all, it is not so much *what* one plants as *how* it is planted, and how it is cared for. The beauty of a hedge is largely a matter of pruning. Too much pruning is undesirable. Less pruning gives a more natural appearance. And even this depends on the kind of hedge-plant used.

CAN YOU GIVE SIMPLE DIRECTIONS FOR TREE-PLANTING.—This is a suitable topic for April. I shall touch upon the important points briefly.

The first requirement is a good tree. The next is good soil to plant it in. Dig the holes larger and deeper than necessary. Loosen the earth in the bottom of the hole, and put in some good soil. Then place the tree in position, after having cut off all broken roots. Sprinkle good earth on and among the roots until the hole is half-filled. Then tramp it down, and pour in a bucket of water. This will wash the earth among the rootlets. Continue filling in the earth and tramping it, until the soil is an inch or two higher than the surrounding surface. That will prevent rain standing about the root.

The last soil taken out when digging the hole, should not be the first to go in. It is not so good as the surface soil.

Don't expose the roots to the sun or wind, keep them covered until ready for planting. If you have bought the trees, don't unpack them until the holes are dug. Then keep wet bags over them while carrying them to the spot where they are to be planted.

If the trees arrive before you are ready to plant them, dig a trench, and bury their roots until you can plant them.

As soon as the planting is completed, cut back the tree considerably. Possibly, one-third of the whole tree could be cut off.

If native trees are to be transplanted from the woods, much of the earth can be moved with them. In such case, pruning off the side branches except, perhaps, very near the top would be sufficient. Early spring is a good time to transplant. Use plenty of water.

ANIMAL NATURE STUDY.

H. G. PERRY.

The Raccoon.

The Raccoon, or "Coon," may be readily recognized by its shape and color. It somewhat resembles in general appearance and habits, a small bear. It has a sharp nose, arched hind quarters, and flat-soled feet. The body is grayish-black in color, face markings black and gray, and the long furry tail tipped with black and marked with black rings.

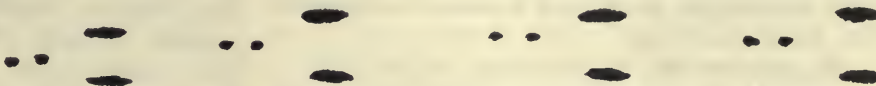


THE RACCOON TREED.

Cut loaned by The Comstock Publishing Co. from their book, "Handbook of Nature Study."

These animals hibernate in families during the winter, the whole family denning together, in a hollow tree, a stump, or a log, from about the last of December to the first of April. During warm spells of early winter, they frequently leave their dens, and make nightly circuits to stubble-land, to gather in the gleanings.

When walking, the "coon" plants its whole foot on the ground, making a track that closely resembles the foot-marks of a very small baby. You may find such tracks in spring and fall snow, around old grain fields. Watch for them. Do dogs and cats make similar foot-marks? The foot of the "coon" is said to be plantigrade.



RABBIT'S TRACKS.

Cut loaned by The Comstock Publishing Co. from their book, "Handbook of Nature Study."

Pupils should be taught the derivation of this word. Are the feet of the dog and cat plantigrade? Examine the tracks of the rabbit, and draw your conclusions about its feet.

Are the feet of the horse, cow, sheep, squirrel, and man plantigrade? Determine what part each of these animals is walking on.

As one traces "coon" tracks in snow, he finds places where they are much like those of the cat. Why this change? Are the steps now shorter or longer than before?

The "coon" is a representative of the carnivora, but one that is quite omnivorous. He is fond of frogs, fish, birds, eggs, and animal food of all kinds, and is said to eat even snakes. During Autumn he becomes very fat in preparation for the hibernating season, and, at this time makes serious levies on the farmer's grain fields and poultry houses.

What is the chief use of its fur? How many pelts are sold annually? What is their value? How does this compare with other kinds of fur?

For information along this line, and for the range of this animal in Canada, see "Fur-Farming in Canada," page 70, and map number seven. Notice the excluded territory—all of P. E. Island, all of Cape Breton, and the eastern part of Nova Scotia, and the northern part of New Brunswick—nearly half of the Province. The fact that such a northern limit exists in our Provinces is of considerable interest. Do you know of other animals, or even plants, that have their limits in our Provinces? What factors determine animal ranges?

The reader may be interested to know that a black strain of Raccoons appeared in the litter of one of ordinary color, captured near Falmouth, Nova Scotia, a few years ago. Of the four cubs, three were black, and one gray,

and in the breeding of this black strain, they have since produced offsprings, both black and gray, in the proportion of about three to one. This brings us to the great field of heredity* There are many science primers on this, and the kindred new science of Eugenics, which every teacher should read. Some knowledge of the laws of heredity is quite a necessary equipment for effective teaching.

In captivity the raccoon soon becomes docile and amiable, and they make very intelligent and at times mischievous pets.

The Skunk.

The skunk is also a hibernating animal, and resembles the raccoon in form, though somewhat smaller. He has a pointed nose, plantigrade



THE SKUNK,
IN HIS NATIVE HAUNTS.

Cut loaned by The Comstock Publishing Co. from their book,
"Handbook of Nature Study."

feet, arched hind-quarters, and a long tail. He varies in color from entire black to the more common variety of black, with two white strips along the back, and down the sides of the tail, and a white strip in the face.

This animal affords a good example of warning coloration. He is seldom in a hurry, but ambles along with a slow rolling gait, holding his black-and-white tail aloft, like a banner in the sky, "secure in the possession of an intolerable malodorous secretion." Most animals leave him alone. Why? Account for the fact that

these animals often stray into towns and cities. What would happen if a rabbit or raccoon should attempt such a visit?

On what does the skunk feed? Does he hunt his food during the day or night? How is he often a nuisance to the farmer? Does his fondness for mice, grasshoppers, grubs, beetles, etc., injure or benefit the farmer?

Most students of Nature call the skunk a silent animal. Mr. Burrows says: "The most silent creature known to me," but Thoreau tells of hearing one keep up a "fine grunting, like a little pig or a squirrel." And the man who first taught the writer to be kind to and to love all animals, was wont to tell of a skunk family — a mother with seven kittens — he happened upon in a pasture, and of the low grunting "skunk talk" of the mother as she trotted along, directing the movements of her playful kittens. "The prettiest picture in Nature."

The fur of the skunk is of considerable value, and the animal is beginning to be farmed in several localities in the Maritime Provinces. Much of this fur is dyed and finds the market under various fancy names. Look up data *re* the price of pelts, etc., and compare with data for raccoon fur.

The Wood-chuck, or Ground-hog.

The Wood-chuck, or Ground-hog, has also been hibernating during the winter, and at this time of year is about resuming activity again. A tradition in some parts of the United States says, that he leaves his den on Candlemas Day, and, if he can see his shadow, returns to it for another sleep, as "Winter will take another flight." In the Maritime Provinces, such meteorological instinct has been attributed to the bear.

Find the den of the Wood-chuck. How does it compare with that of the raccoon? Where is it located? Does it vary in this respect? What is his chief food? Compare the diet of the raccoon, skunk and wood-chuck. Note that the wood-chuck feeds principally during early morning and in the evening, though you will frequently find him out of his den during the day.

The fur of this animal is of little or no commercial value. Why?

Study this animal as opportunity presents during the summer. What is his chief means of

*"Heredity in the Light of Recent Research," by Doncaster. The Cambridge University Press, Fetter Lane, London. E.C. Price 25c.

"Heredity," by Watson, The Upper Canada Tract Society, Toronto. Price 20c.

"Heredity," by Dr. Castle of Harvard, Published by D. Appleton Co., New York. Price \$1.50.

defence? Does he possess protective or warning coloration, or both? Does the skunk have protective coloration? Study other animals for protective and warning coloration. Notice that all animals that seem to possess protective coloration are lighter on the under-parts. Why? Note also that many animals that are very conspicuous in the museum, enjoy a high degree of protection when placed in their nature haunts. Make lists of such cases as come under your



A YOUNG GROUND-HOG,
AT THE DOOR OF HIS HOME.

Cut loaned by The Comstock Publishing Co. from their book, "Handbook of Nature Study."

observation. Be on watch yourself and set pupils to work on this subject. You will find splendid examples among birds. Does man take advantage of protective coloration in his own clothing, etc.? Note painting of our warships, the khaki uniform of our soldiers, etc. Later in the year, we hope to discuss this subject of protective and warning coloration to great length.

Sydney, N. S., is to have a permanent building for her Technical School. Professor Sexton, the supervisor, has been in Sydney conferring with the Technical School Committee over plans for a building to be erected in Charlotte Street. The closing exercises of this year's classes will be held about the middle of April. The new departments of the school have met with great success, all classes have been well attended.

Scene outside an Islington Picturehouse:—
"SNATCHED FROM DEATH
IN 3 PARTS."

It would, perhaps, have been kinder to leave him alone.—*Punch*.

WINTER BIRDS.

REPORTS FROM EASTERN NOVA SCOTIA.

Antigonish:—Old Squaw, Long-tailed Duck, 1; Hairy Woodpecker, 1; Blue Jay, 2; Canada Jay, 4; American Crow, abundant; Redpoll; Snow Bunting, small flocks; Tree Sparrow, 1; Northern Shrike, 2, singing, January 24; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 3; Chickadee, common; Acadian Chickadee, tolerably common; Golden-crowned Kinglet, tolerably common.

Guysborough:—English Sparrow, in town; Snow Bunting; Chickadee, 10.

REPORTS FROM MIDDLE NOVA SCOTIA.

Colchester:—Blue Jay, American Crow, English Sparrow, Snow Bunting, Northern Shrike (Butcher-Bird), Chickadee.

Hants:—Blue Jay, 7; American Crow; Pine Grosbeak, 8; English Sparrow; Redpoll; Snow Bunting; White-breasted Nuthatch, 2; Chickadee, 5; Acadian Chickadee, 1; Ruby-crowned Kinglet, 1.

REPORTS FROM WESTERN NOVA SCOTIA.

Kings:—Canada Goose, a flock, March 23, Wolfville; Ruffed Grouse, 5; Blue Jay; American Crow, very common; Redpoll; Snow Bunting, flocks; Northern Shrike, 2; White-breasted Nuthatch, 3; Chickadee, common; Acadian Chickadee, 5.

Queens:—American Crow, very common; Long Sparrow, March 18, 1, heard sing, Liverpool; Snow Bunting, a flock of 50; Chickadee.

Shelburne:—Canada Goose, large flocks, Barrington; American Coot, 1; Canada Grouse (Spruce Partridge), not plentiful; Ruffed Grouse, fairly plentiful; Downy Woodpecker, common; Canada Jay, quite common in November; Northern or American Raven, not common; American Crow, abundant; English Sparrow, abundant; Snow Bunting, only one flock; Junco, several seen, all winter; Song Sparrow, 1, February 13, Barrington; Chickadee, common; Golden-crowned Kinglet, few, November; Ruby-crowned Kinglet, few, December.

Shelburne also gives an interesting list of water birds, many of which are seldom seen far inland:—Pied-billed Grebe, Loon, American Herring Gull, Shell Drake, Mallard Duck, Black Duck, Green-winged Duck, Blue-winged Duck, Blue-bill Duck, Old Squaw, Whistler.

REPORTS FOR NEW BRUNSWICK.

Kings:—Tree Sparrow.

Gloucester:—Blue Jay, flocks; American Crow, 4; Snow Bunting, large flocks; White-throated Sparrow (Old Tom Peabody) 8, New Brandon.

Kent:—Redpoll; Horned Lark (Shore Lark) 2.

Throughout the tabulation the numbers have been given up to fifteen when reports indicated them. Where no numbers are given the numbers reported have exceeded fifteen.

REMARKS:—The bird described in a report from Colchester, as being a little smaller than the English Sparrow,

with a red crown and throat, etc., is probably the male Redpoll. Compare the bird with the description in some good Bird-book, e. g., Chapman's Handbook of Birds of Eastern North America, published by D. Appleton Co., New York.

The Northern Shrike is one of our most interesting winter birds. I have seen him strike down the English Sparrows in the street. He also is said to kill other small animals. He has the habit of hanging his prey upon the thorns of the Hawthorn, and in the forked branches of other trees. The trees thus adorned remind one of a butcher's shop, hence he is often called, "Butcher Bird." Our report shows he is also a musician as well as a freebooter. Listen for his song. "Often in the warm days of March he may be heard singing on the top of some tall tree." His food consists chiefly of mice, noxious insects, and the English Sparrow, so he is a bird worthy of all protection.

The Screech Owl and a smaller species have been reported from Shelburne. Colchester also reports two Owls but neither describes nor names them. A Colchester report also mentions seeing a Robin, March 14, Middle Stewiacke. Robins frequently remain with us for the winter, which probably accounts for this record. The spring migrants are readily distinguished from winter Robins by their brighter coloration. Watch for them.

Note that the Canada Goose has been common in Shelburne, Barrington, all winter; a report from St. John, N. B., mentions a flock passing northward January 29.

It is also interesting to note that birds that come to us in the winter, from the north, seem to gradually thin out towards our southern limits, e. g., Snow Bunting, abundant in places north, seen but once or a few times south. The reverse is true of many birds that go south from us in the winter.

The Acadian Chickadee was formerly called Hudsonian Chickadee. Snow Bunting is synonymous with Snowflake.

A former provincial teacher, remembering the home teachers and our interesting work of last year, writes from Philadelphia, saying that the first Robins she saw this year were at Mount Holly, New Jersey, March 17. On that date she also recorded bees and a junco.

This serves as a very good introduction for spring work. We hope to have reports from many more places for next month. Watch for spring migrants and report as directed in the March REVIEW.

Find a family of thrushes and carefully note what takes place. The old male thrush will sing the sweet song in loud, clear, flutelike notes once, and then stop to listen while the young birds try to imitate the song. Some will utter one note, some two. Some will utter a coarse note, others a sharp note. After a while they seem to forget their lesson and drop out one by one. When all are silent the old thrush tunes up again, and the young thrushes repeat their efforts, and so it goes on for hours. The young birds do not acquire the full song the first year, so the lessons are repeated the following spring.

BIRD PICTURES FREE TO TEACHERS.

The sum of \$15,000 has been contributed to the National Association of Audubon Societies for the purpose of helping teachers to give simple instruction in bird study to their pupils during the year 1914. The Audubon plan of helping teachers in this connection is as follows:

Any teacher or other person who will interest not less than ten children in contributing a fee of ten cents each to become Junior Members and will send this to the office of the National Association, will receive for each child ten of the best colored pictures of wild birds which have ever been published in this country. With each one of these ten pictures goes an outline drawing intended to be used by the child for filling in the proper colors with crayons. Each picture is also accompanied with a four page leaflet discussing the habits and general activities of the bird treated. Each child also receives an Audubon button. The cost of publishing and mailing this material is a little more than twice as much as the child's fee.

The teacher who forms such a class receives without cost to herself one full year's subscription to the beautiful illustrated magazine "Bird-Lore." This is the leading publication in the world on bird-study. To the teacher also there is sent other free literature containing many hints on methods of putting up bird boxes, feeding birds in winter, and descriptions of methods for attracting birds about the home or school house.

The ten subjects supplied to children this year are as follows: Nighthawk, Mourning Dove, Meadowlark, Flicker, Sparrow Hawk, Screech Owl, Purple Martin, Cuckoo, Humming Birds and Robin.

In 1913 school children to the number of 53,157 availed themselves of this opportunity. Hundreds of enthusiastic letters have been received from teachers.

As long as the Association's special fund for this work holds out this offer is open to any teacher in the United States or Canada. Any teacher reading this notice may immediately form a class, send in the dues and receive the material, or further information will be gladly furnished upon request.

T. GILBERT PEARSON. *Secretary.*

1974 Broadway, New York City.

HOW TO STUDY "THE ESSAYS OF ELIA."

Prose selections are recognized as the hardest of all lessons in English. It is difficult to give the variety that is easily got in poetry, and the appeal to the ear is not so strong. There is great temptation to dwell upon questions of language, upon derivation, distinctions of meaning, and grammar. It is not easy to find out how to interest the young student. But interest is the first essential, whether we are thinking of the ultimate and really important aim in teaching literature, namely, to lead the student to enjoy good books; or of the more immediate and pressing one, which is to prepare him for examinations.

To what point in the Essays of Elia are we to direct the pupil's attention? Compare them with other Essays. What do we get from them? Macaulay's Essays give us historical and literary information. Addison and Steel wrote with the aim of reforming manners and customs, and give us lively pictures of the life of the time. But Charles Lamb offers us neither improving information nor instruction. His Essays read as if he wrote them for his own amusement, for the pleasure of expressing his likes and dislikes, his opinions, fancies and dreams. They reveal to us one of the most charming and lovable men that ever lived. And if we do not gain this impression from reading them, we have missed all that they mean.

Collect the essays that are professedly autobiographical, and see if you cannot sketch his life from "The Old Benchers," "Christ's Hospital," "The South Sea House," and the others. What do you learn from these of his birth and education, position in life, family, friends, occupations? What important event in his life is never touched upon? Go on from the outward accidents and events of life to the character and disposition of the man. You will find passages of self revelation in nearly all the essays. Look for them in "A Chapter on Ears" "Witches and other Night-fears," "New Year's Eve." Do not neglect "Old China." What do you learn from these of his tastes; his preferences among men, books, surroundings; his affections; religious belief; his amusements? What contemporary writers were his friends? From what poets does he quote? Make one essay throw light on another. Study the description of himself in the Preface to the "Last Essays." With the

description of his sister, under the guise of a cousin, in "Mackery End," compare the account of their life in "Old China." Some passages in "Detached Thoughts on Books and Reading" should also be read with this essay.

Notice that while he is constantly revealing himself, and is never afraid of the pronoun "I," and while he himself is more interesting than anything else that he writes about, he is as far as possible from being self-centred. Life is full of interest to him. "Glad did I live," is as true of him as of the writer of those words, and that gladness made his life, with its awful tragedy, not resigned, but gallant. In "New Year's Eve," he tells us some of the things in which he found pleasure—and in "Dream Children," of those blessings which were not for him, except in dreams.

Study his descriptions of persons and places. How does he convey them? By a complete, closely woven picture, or by a succession of scattered touches? In what kind of person did he find most interest? With what feelings did he study and describe them?

Mr. Ernest Rhys, in an introduction to the "Essays" in the Canelot Series, has this pregnant saying. "There is more in "Elia" than a fine set of literary exercises, as the Essays seem to be too often regarded. One finds in them, indeed, the *perfect expression of Lamb's whole feeling about life.*"

It is no light thing for young people to have their outlook upon life influenced by one who saw it as "the gentle Elia" did, with such courage, such imagination, and such sympathy.

(To be continued).

THE SINGING WIRES.—Most of us have wondered at the curious "singing" of the telegraph and telephone-wires often heard along quiet country roads. Professor Field of the University of Ottawa suggests that the noises are due to vibrations transmitted to the wires by the posts, which receive them from the earth, and that they are the results of earth vibrations identical with those that the seismograph, or earthquake-detector, records. "The sound of the wires," Professor Field adds, "is the song of the barometer; if it is low, a change in the weather may come in two days; if sharp, it may be immediate."—*Youth's Companion*.

FOR COUNTRY BOYS.

A SUPERINTENDENT.

Every boy ought to know how to measure land by "pacing," and this is one of the practical things that may be taught in the schools. Measurements obtained in this way are not expected to be exact, but they are near enough to exact measurements for many purposes. It is not advisable to take up the subject before the sixth year in most schools, as the pupils are not able to comprehend it fully before this time. The pupils should be thoroughly familiar with the tables of length and square measures.

LENGTH OF PACE.

The length of a pace should be as near one yard as possible, and with a little practice boys will be able to get the right length. It is a good plan to measure off, on the floor, five or more yards in a straight line. Mark the yards distinctly with crayon. Now let a boy start at one end, putting his toe on the first line, then step on each line for the entire distance. A boy soon learns how long it is necessary for him to step to cover a yard. After some practice of this kind let a boy take five steps on some part of the floor that is not divided into yards. Mark the starting point and the end of the five paces. Let the boy measure the distance between the marks to see how near to fifteen feet he paced. A little contest between the boys in a class may be arranged and much interest added to the work in this way. It is suggested that it is better to do things of this kind at some time outside of school hours.

THE ROD.

By skilful questioning bring out the facts that a pace is about a yard and that a rod is five and one-half yards, or a little over five paces. By making the paces a very little longer, five paces will cover a rod, and for the purposes of "rough" measurements, this is near enough to the exact measure. It will be well to mark off a rod on the floor, and to have the boys practice in pacing this until they can cover the rod in five paces. For small fields the rod is the standard unit for length and for getting the area. Only fields that are nearly rectangular in shape can be measured in this way and it should be understood that all the fields given in the examples in this article are rectangles.

MEASURING.

Having learned that five paces equal one rod, the number of rods in any distance is easily found by dividing the number of paces by five. Of course the best way is to pace off real distances and this should always be done when it is possible. The teacher can also give many problems based upon imaginary distances or fields. For example: A walk is 40 paces long. How many rods in length? Every five paces equal one rod, therefore, $40 \text{ paces} \div 5 = 8 =$ the number of rods.

The following simple examples are given as illustrations:

1. The front of a lot is 75 paces long. Find the distance in rods.

Ans.: 15 rods.

2. A boy paced the distance between the school building and the nearest house and found that he made 125 paces. How many rods in the distance?

Ans.: 25 rods.

3. One side of the school yard is 80 paces in length. How many rods?

Ans.: 16 rods.

4. From the door of the schoolhouse to the postoffice it is 320 paces. What is the distance in rods?

Ans.: 64 rods.

5. A farmer found that there were 220 paces in one side of a field. What was the distance in rods?

Ans.: 44 rods.

Let the boys measure distances about the school grounds by pacing. Then ask them to measure the same distances with a cord that is just a rod long. Of course a regular tape measure is better than a cord.

AREAS.

An acre is 160 square rods. The area of any field, in acres, is found by dividing the number of square rods in the field by 160 square rods. For example: A rectangular field is 100 paces long and 80 paces wide. Find the number of acres in the field.

100 paces in length = 20 rods.

80 paces in width = 16 rods.

The area is 320 square rods.

$320 \text{ square rods} \div 160 \text{ square rods} = 2.$

The number of acres is 2.

Note.— It is taken for granted that the pupils understand how to find the area of a rectangular field when the length and breadth are given.

The following examples are given for illustration. The teacher will readily make as many more as may be necessary. It is suggested that all original examples should be worked out by the teacher before they are given to the class.

1. A farmer wished to find the number of acres in a small field. He found that the field was 80 paces long and 50 paces wide. What was the number of acres?

Ans.: 1 acre.

2. The length of a field is 240 paces and the width is 50 paces. Find the area in acres.

Ans.: 3 acres.

3. A farmer planted a field of corn which was 125 paces long and 80 paces wide. How many acres did he plant?

Ans.: $2\frac{1}{2}$ acres.

4. A farmer bought a field that was 225 paces long and 80 paces wide. He agreed to pay \$200 an acre for it. He wished to find the approximate cost. How much was it?

Ans.: \$900.

5. A farmer paid \$600 for a field. He wished to find the approximate cost per acre. He found that the field was 240 paces long and 50 paces wide. What was the price per acre?

Ans.: \$200.

6. A farmer paid \$1,200 for a field. He wished to find the approximate cost per acre. He found that the field was 160 paces long and 100 paces wide. How much did he pay per acre?

Ans.: \$300.

7. A real estate dealer bought a lot that was 300 paces long and 80 paces wide. What was the number of acres?

Ans.: 6 acres. —*Western School Journal*.

THE QUESTION BOX.

1. M. L. W., writing on March 13, says: "A flock of small birds have been here for a month. They come to the barn for hay-seeds. I think they came during the cold week in February. They are about the size of the Pine Warbler, dark grey above with two white bars on the wings, light grey under-parts, with rosy breast and rose-coloured patch on head from bill to back of crown. Will you kindly tell me if it is the Redpoll."

1. In all probability the Redpoll (*Acanthes linaria*). But the crown patch would be crimson.

2. Is the three-toed Arctic Woodpecker common in all parts of New Brunswick in the winter?

2. This bird is given as an uncommon resident throughout the year. It has been taken in October and in February.

3. I have lately seen birds in flocks, which I have been told are Redpolls. Some of them have breasts suffused with red, while others have not. Are they a different species?

3. Probably old and young redpolls; in which case the breasts would show a colour more rosy than red in the adults, while in the young the colour would be wanting. All would show a crimson head patch.

4. S. B. J.—

1. *Principal*.

Archimedes first established the truth.

2. *Subord. Noun. In appos. with "truth."*

That a body plunged in a fluid loses as much weight.

3. *Subord. Adjectival—qualifying "weight."*

As is equal to the weight of its own volume of that fluid.

Detailed Analysis of 3.

Subject: as (relative pronoun).*

Verb is

Complement: equal to the weight of its own volume of that fluid. (Adjectival).

*After such, same, so much, so great, etc., the rel. employed is not *who* but *as*.

FOR EMPIRE DAY.

Some teachers are no doubt already looking for material for Empire Day lessons and exercises. We suggest a consideration of the following poems:—

Tennyson's, *Ode on the Death of the Duke of Wellington*.

Browning's, *Home Thoughts from Abroad*.

Drayton's, *Agincourt*.

Doyle's, *Private of the Buffs, The Red Thread of Honour, The Loss of the Birkenhead*.

Scott's lines on Pitt, Nelson and Fox in the introduction to the first canto of 'Marmion. The Poems of Henry Newbolt (to be had in Nelson's Sevenpenny edition, sold here for twenty cents).

Alfred Noyes's *Drake*.

Good selections may be found in *Poems of English History*, J. A. Nicklin. *Lyra Heroica*, W. E. Henley. *Lyra Historica*, Windsor and Turrall. *Carmina Britannica*, C. L. Thomson, *Poet's Walk*, Mowbray Morris.

MEMORY GEMS.

I hear from many a little throat
 A warble, interrupted, long;
 I hear the robin's flute-like note,
 The bluebird's slenderer song.
 Brown meadows and the russet hill,
 Not yet the haunt of grazing herds,
 And thickets by the glimmering rill
 Are all alive with birds.
 —William Cullen Bryant.

The willow's whistling lashes wrung
 By the wild winds of March,
 With sallow leaflets lightly strung
 Are swaying by the tufted larch,
 The elms have robbed their slender spray
 With full-blown flowers and embryo leaf;
 Wide o'er the clasping arch of day
 Soars like a cloud their hoary chief.
 Holmes.—

I heard the sparrow's note from heaven,
 Singing at dawn from the alder bough;
 I brought him home, in his nest, at even;
 He sings the song, but it pleases not now,
 For I brought not home the river and sky —
 He sang to my ear — they sang to my eye.
 —Emerson.

Do you ask what the birds say? The sparrow, the dove,
 The linnet and thrush say, "I love, I love."
 In the winter they're silent, the wind is so strong;
 What it says I don't know, but it sings a loud song,
 But green boughs and blossoms, and sunny, warm weather
 And singing and loving all come back together.
 —Samuel Taylor Coleridge.

Leaf from leaf Christ knows,
 Himself the Lily and the Rose.
 Sheep from sheep Christ tells,
 Himself the Shepherd, no one else.
 Star and star he names,
 Himself outblazing all their flames.
 Dove by dove, he calls
 To set each on the golden walls.
 Drop by drop, he counts
 The flood of ocean as it mounts.
 Grain by grain, his hand
 Numbers the innumerable sand.
 Lord, I lift to thee
 In peace what is and what shall be.
 Lord, in peace I trust
 To thee all spirits and all dust.
 —Christina G. Rossetti.

THE ROBIN.

My old Welsh neighbour over the way
 Crept slowly out in the sun of spring,
 Pushed from her ears the locks of gray,
 And listened to hear the robin sing.

Her grandson, playing at marbles, stopped,
 And, cruel in sport, as boys will be,
 Tossed a stone at the bird, who hopped
 From bough to bough on the apple-tree.

"Nay!" said the grandmother, "have you not heard,
 My poor, bad boy, of the fiery pit?
 And how, drop by drop, this merciful bird
 Carries the water that quenches it?"

He brings cool dew in his little bill
 And lets it fall on the souls of sin:
 You can see the mark on his red breast still
 Of fires that scorch as he drops it in.

My poor Bron rhuddyn! my breast-burned bird,
 Singing so sweetly from limb to limb,
 Very dear to the heart of our Lord
 Is he who pities the lost, like Him."

"Amen," I said to the beautiful myth,
 "Sing, bird of God, in my heart as well;
 Each good thought is a drop wherewith
 To cool and lessen the fires of hell.

"Prayers of love like raindrops fall,
 Tears of pity are cooling dew,
 And dear to the heart of our Lord are all
 Who suffer, like Him, in the good they do."
 J. G. WHITTIER.

AN APRIL DAY.

All day the low-hung clouds have dropped
 Their garnered fulness down,
 All day a soft gray mist has wrapped
 Hill, valley, grove and town.
 There has not been a sound today
 To break the charm of nature,
 Or motion, I might almost say,
 Of life, or living creature;
 Of waving bough, or warbling bird,
 Or cattle faintly lowing,
 I could have half believed I heard
 The leaves and blossoms growing.
 I stood to hear, I love it well,
 The rain's continuous sound.
 Small drops, but thick and fast they fell,
 Down straight into the ground.
 For leafy thickness is not yet
 Earth's naked breast to screen,
 Though every dripping branch is set
 With shoots of tender green.

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MEDICAL INSPECTION OF SCHOOLS.

The Public Health Journal for March continues its reports of Medical Inspection in Canadian Schools.

Dr. John K. McLeod, City Medical Officer of Sydney, N. S., draws attention to the fact that Sydney took up this work in 1907, three years ahead of Toronto, and that it has been of much benefit to the city in more ways than one.

British Columbia is as yet the only Province in the Dominion, having Provincial Legislation, governing and controlling Medical Inspection of Schools. It is expected that Ontario will soon have a provincial law establishing such inspection.

Interesting reports of the work of Medical Inspectors of Schools and school nurses are sent from Victoria, Vancouver, New Westminster, Nelson, South Vancouver, from Montreal, Westmount and Lachine, and from ten towns in Ontario.

THE STUDY OF BIRDS.

When studying the birds this spring, do not entirely overlook their place in literature and mythology. There are many beautiful bird poems. Shelley's "Ode to a Skylark" and Bryant's "To a Water-fowl" are among the gems of literature. "Robert of Lincoln," by Bryant, appeals pleasantly to everyone, and the "Sand-piper," by Mrs. Thaxter, is a general favorite. Longfellow's "Heron of Elmwood" and "Springtime at Killingworth" contain many beautiful thoughts.

The dove, like the lily, is symbolical of peace, and has an interesting history.

On account of his supposed supremacy over other birds, the eagle has been made the emblem of many countries. He has been celebrated as a bird of might ever since Pindar wrote of the Theban eagle.

The owl, Minerva's bird, has always been given credit for wisdom; while Juno's peacock has always been called vain.

The swallow has an interesting history. He is sometimes called "The Bird of Consolation," because, according to a Scandinavian story, he spread his wings under the cross to lighten its weight for the Saviour.

An old Greek proverb warns men not to harbor swallows, as they are babblers. It is said that a swallow chirped about the head of Alexander the Great to warn him that his family were plotting against him.

The Emperor Charles, when besieging a town of Flanders, is said to have taken a swallow under his protection. Longfellow has told the story in his poem. "The Emperor's Bird's Nest."—*Exchange*.

HISTORY PAPER.

1. Six events in the reign of Henry VIII.

(1) He married Katherine of Aragon.

(2) He soon got tired of her.

(3) He wanted to get rid of her.

(4) He wanted a divorce.

(5) He got a divorce for her.

(6) I don't no.

2. Wolsey was called the boy bachelour, because he passed the labour examination when he was fourteen. My sister passed it when she was twelve.

3. On the side of the king there were all the people who had long hair, but when they had their hair cut short they went on the side of parliament."—*Punch*.

Is the word "succeed" so stale that we must always say "make good?" Is the word "win" so weak that we must always say "win out?"—*Youth's Companion*.

CURRENT EVENTS.

The threats of armed rebellion in the north of Ireland, against Home Rule, which would give Ireland a separate parliament such as we have in Canada, became so alarming that the British Government began to move troops to the northern counties as a precautionary measure. Then it appeared that many of the army officers objected, and would rather resign their commissions than aid in suppressing a rebellion in Ulster. This immediately raised the question of whether parliament should rule the army, or whether the army should take control, as in the days of Oliver Cromwell; and the crisis has led to the resignation of the Secretary for War in the British Ministry, and also of Sir John French, chief of the general staff of the British army, and Sir John Ewart, adjutant-general of the forces. With the consent of the King, Premier Asquith has placed himself at the head of the War Office, and will go back to his constituents for re-election. So the month ends with the Prime Minister out of Parliament for the time being, and with threats of a mutiny in the army as well as an Orange rebellion; and yet nearly everybody believes that nothing very serious will come of it all, except, perhaps, a reorganization of the army, to bring it more fully under the control of the civil authorities.

After a week of heavy fighting in and around Torreon, there is no certain news of the result of the attack, but there are rumors that Villa's army has been overwhelmingly defeated. It is also reported that Zapata, the leader of the revolutionists in Southern Mexico, has been killed in battle with the Federal troops in another part of the country.

The United States Congress is still debating the question of repealing the Panama Canal tolls exemption, at the request of President Wilson, in fulfilment of the concessions made in the Hay-Pauncefote treaty.

The work of building the city of Canberra, the new capital of Australia, will begin at once, and will probably be finished in about three years, so far as to make it ready for occupation. One remarkable feature of the new city is to be a series of artificial lakes or basins, of considerable extent, which are expected to have a moderating influence on the climate.

Sonjatin is the name of a new substitute for rubber tubing which comes from Germany. It is not only cheaper, but more durable than rubber, and resists higher pressure.

Cellophane is a new substance resembling transparent paper, and said to be insoluble in water, and unaffected by ethers, alcohols, and alkalis.

Recent experiments with the wireless telephone have given wonderful results. A conversation was kept up between two Italian battleships, until they were forty-five miles apart, and the signals from a Canadian wireless station were heard at a distance of over four thousand miles.

A bill before the British Parliament will prohibit the importation into the United Kingdom of the plumage of wild birds, and forbid any person possessing or being concerned in the sale of such plumage.

A widow's pension bill is before the New York state legislature. It is based upon laws adopted in several countries of Europe, and provides a certain monthly payment for widows, who have children to support.

In Japan, they punish the parents of boys who smoke cigarettes, as well as those who sell to the boys.

The Suez Canal is to be deepened to a depth of thirty-nine feet, and other costly improvements will be made to enable it to compete with the Panama Canal. It has the great advantage of affording the shortest route from Europe to the Far East; and it has no locks and no tides.

The great barrage of the Euphrates, which is to restore by irrigation the fertility of Mesopotamia, and thus add an enormous area to the corn lands of the world, has been completed and formally opened for use.

The actual work of construction of the Panama Canal is now completed. The work yet to be done is chiefly dredging made necessary by the numerous landslides.

Inquiries into the death of Benton, the British subject killed in Mexico, seem to have established beyond a doubt that he was killed in the presence of Villa, and that both Villa and Caranza sent out false stories in respect to his death. The immediate result of the investigation is that the rebels of the north, who, partly because of their well chosen name Constitutionalists, have had the sympathy of many in the United States, are losing that sympathy.

Castro, the former military dictator of Venezuela, is in Trinidad, where he is supposed to be planning another Venezuelan revolution.

The situation in Brazil is not clear; but there are indications that the uprising, or threatened uprising, is over for the present.

Very heavy military expenditures in Russia are causing alarm in Austria, as well as in Sweden. Many think that another Balkan war is impending, and that Russia is preparing to move in that direction.

The Canadian government has sent the steam whaler, Herman, to search for the lost ship Karluk, of the Stefansson expedition. The Russian authorities have been notified that the Karluk is supposed to be drifting westward, and may reach the Arctic coast of Siberia.

The number of immigrants to Canada last year was more than four hundred thousand, and one hundred and fifty thousand of them were British.

New York City is celebrating the three-hundredth anniversary of its settlement, the Dutch having established a trading post there in 1614.

A special commissioner sent by the Canadian government to examine the place reports in favour of the development of St. Croix Harbour as a winter port. This harbour is at the head of deep water navigation on the St. Croix, and just above St. Croix Island, where the French made their first settlement in 1604. After the lapse of many years, Champlain's selection of a port seems to have been justified; though the milder winters and the better soil, which the early settlers found in the Annapolis Valley, were sufficient reason for their abandoning St. Croix and making their permanent settlement at Port Royal.

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SCHOOL AND COLLEGE.

The statement of the Rhodes Scholarship Trust for 1912-13 has been issued. During the year there were one hundred and seventy-five scholars in residence at Oxford, of whom seventy-three were from British Colonies, eighty-eight from the United States, and fourteen from Germany. Among those who obtained distinctions was Mr. A. L. Burt, Ontario, who divided the best prize with another student, and took the Robert Herbert Memorial Prize. One Canadian, Mr. L. Brehaut of Prince Edward Island, was awarded the B.Sc. degree; and Mr. J. E. Read of Nova Scotia, obtained the degree of B. C. L. Eight Canadians took honours in various subjects, Mr. Dyke, of British Columbia and Mr. McNair of New Brunswick winning first class honours, the first in Natural Science, the second in jurisprudence.

An analysis of the lines of work taken up by Rhodes Scholars who have left Oxford shows that one hundred and forty-four are engaged in educational work, and one hundred and thirteen are practising law. The next largest number, twenty-five, is of those engaged in the practice of medicine. Out of over four hundred ex-scholars, only eleven have remained in England.

Dr. Carter, chief superintendent of New Brunswick Schools, attended a convention of Superintendents at Richmond, Virginia, February 23rd, 28th. This convention is a department of the National Education Association of the United States, and was attended by nearly three thousand superintendents, and other educational officials

from all parts of the United States. Special sessions were held of different departments of the Association, such as The School Garden Association, The National Council of Teachers of English and others. Dr. Carter was the only representative from the Maritime Provinces, and the only Provincial Superintendent at the convention. He also visited Hampton Institute, and some of the schools of New York City.

Woodstock, N. B., is the latest town to report an increase of salary for teachers. Provided their contracts are renewed for next year, first class teachers in this town will receive an increase of \$50.00 a year, and second class teachers one of \$50.00.

The latest reports received of the murder of Dr. C. B. Robinson, in Amboina, on December 5th, indicate that his death was sudden and probably painless. He fell a victim to the superstitious fears of some Boetonese, who took him for a mythical bad man, that they believe goes about in November and December to kill children. Five of the murderers were arrested and confessed. The Director of the Bureau of Science, Manila, writes of Dr. Robinson, "He had been an enthusiastic and untiring worker, and the results of his efforts in Amboina will redound to the credit and the advancement of Botanical Science."

The School Board of Amherst, N. S., have resolved to supply free writing materials, including pens, ink and the necessary paper, blotters and perishable supplies to the pupils in the schools. It has also been decided to establish an A. class in the County Academy. The *Amherst Daily News* says, that the credit for these important steps

are largely due to the unselfish labours of Mr. B. J. Lawson, who is retiring from the office of Chairman of the Board after a year of hard and efficient work in the service of education.

A free Night School for Jewish students has been established in St. John, and already twelve pupils have taken advantage of the opportunity for learning English.

Three Fredericton teachers, Miss Sadie Thompson, Miss Marion Cadwallader, and Miss Margaret Lynds, have gone to Ottawa to take the two months special physical training course, provided by the Militia Department.

The Alberta Educational Association is to hold its fifth annual convention at Lethbridge, April 14-16. The President of the Association is Dr. A. Melville Scott, formerly on the University of New Brunswick staff. Among other speakers, Professor J. W. Robertson will address the convention.

The many Old Boys of Trinity College School, Port Hope, will be glad to learn of the establishment of a bursary for "the study and practise of reading in public." The principal object is the promotion of expressive, intelligent and effective reading of a chapter in the New Testament.

The donor is Mr. J. A. Culverwell, of Port Hope, who has deposited a capital amount for a nine-year bursary. The prize is to be awarded yearly on the judgment of the headmaster, the Rev. F. Graham Orchard.—*Toronto Mail and Empire*.

Over sixty girls are being taught in the open-air elementary school at Dyfatty, Swansea, notwithstanding biting winds and sharp frost. It is stated that the average weight of these scholars has increased by nearly three pounds during the past three months, whilst children in the enclosed school had only slightly increased in weight during the same period.

The school house at Pugwash, N. S., was struck by lightning on March 19, and the ensuing fire entirely destroyed the building with all its furniture and equipment.

Since the opening of the new Agricultural School at Woodstock, N. B., on March 9th, the results obtained have been more than satisfactory. The school opened with an attendance of twenty-five and at the beginning of the third week sixty-five students were in attendance at the lectures on Monday morning.

Alfred T. Seaman, aged twenty-one, son of Principal J. D. Seaman, of Charlottetown, has been selected as Rhodes scholar for Prince Edward Island. He is a gold medalist of Prince of Wales College and has an excellent record as an athlete.

RECENT BOOKS.

A History of Cavalry—Colonel George T. Denison. The MacMillan Company of Canada, \$2.50. One of the most striking and valuable books written by a Canadian is Colonel Denison's *History of Cavalry*. The first edition, which was published in 1877, gained the Emperor of Russia's prize for the best work on the subject in competition with officers of all armies, and was translated into several different languages. A second edition has just

been published, and is now in the hands of the booksellers. A preface to the second edition, which is a very important part of the book, brings the history of Cavalry down to the present time. The work is the result of great labour and research, and a marked peculiarity of the book, is, that the conclusions and lessons given by the author thirty-six years ago are now being accepted as correct by many of the best authorities on military questions—when the book was written it was thirty years ahead of the times—the times have now come abreast of it.

The experiences of the Boer War, and the war between Japan and Russia, have proved how well Colonel Denison had appreciated what the effect would be of the improved fire arms upon modern war. Rarely has an author been more completely vindicated by the passing of time. The book gives a sketch of the history of the world in one particular phase, and is interesting reading to the general reader.

Professor Lyde, author of several well known text books of geography, believes that "Geography is the most educational of all school subjects except Literature." In this belief he has devoted the introductory chapters of his *School Geography of the World* to certain important principles of the science that are obviously connected with the relation of man to the planet on which he lives. These principles are then applied at some lengths to familiar and important countries, as the British Empire, and the United States of America. The eighth edition of this book is by far the most useful, as it has added to the text one hundred practical problems and exercises, and a list of essay subjects. A most useful handbook for teachers. [Adam and Charles Black, London, 411 pages. 3s. 6d.]

From Messrs. Black comes also *More Pictures of British History*, containing 60 illustrations (32 in colour), and simply worded stories of our history from the time of the Druids to the nineteenth century. Every story has its picture, and together they cannot fail to interest the lucky children who have the book in their hands. [70 pages, 1s. 6d.]

The same firm send us a charming little French story book for class reading, called *Soirees Chez les Pascal* by F. B. Kirkman, M. A. M. Pascal tells his children some familiar fairy stories, they chat about them and look at the pictures. This book with its coloured illustrations is wonderfully cheap at sixpence. [Adam and Charles Black. 48 pages, 6d.]

Macaulay's Essay on Clive appears in an attractive little volume edited by A. J. F. Collins, M.A., with a biographical and critical introduction, and the full notes that are necessary for young students, to whom Macaulay's wealth of allusion and reference presents many obscurities. [University Tutorial Press. 108 pages, 1s. 6d.]

The name of Sarah Louise Arnold is a guarantee for a text book in English. With two colleagues, Miss Arnold has brought out a new series of reading books for beginners, called *The See and Say Series*. Book I is a "Picture Book" which by means of pictures and stories teaches the sounds of the letters and gives simple lessons in word building. Book II is a "Word Book." A teacher's manual accompanies each book, and the series is intended to present the study of words apart from the reading lesson, and to teach

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the children to recognize the sounds represented by each letter, or combination of letters, so that they can readily master the words they meet in their readers. The authors are confident that these books will lessen the time heretofore given to reading, relieve the teacher, and remove obstacles in the way of spelling. The little volumes are very attractive. [Ginn & Co., 35cts. each. Teachers' Manual, 50 cts.]

George Eliot's *Mill on the Floss* has been added to The Standard English Classics published by Ginn & Co. This novel is edited by J. Milnor Dorey, Head of the English Department in the High School of Trenton, N. J. The editor has travelled through the scenes which form the background of the story and has produced a very readable introduction. The book is illustrated, and the notes contain suggestions for discussion and study, as well as explanations. [Ginn & Co., 554 pages, 50 cents.]

We of an older generation, who studied French from the pages of Fasquelle, Pujol, and their kind, look enviously at the books used under what is known as the Direct Method of teaching modern languages. *Lectures Illustrées*, by E. Magee and M. Anceau, intended for use by pupils who have had a year of French, would convince any child that French was a language to be read with pleasure, and not merely studied with pain. Lessons in Elementary Grammar and free composition are provided for. Really charming illustrations accompany each story and poem, and the price of the book, clothbound and containing 63 pages, is only 1s. 6d. [A. & C. Black].

THE MAGAZINES.

The Public Health Journal, the official organ of the Canadian Public Health Association, has issued, in the February and March numbers, papers that should be read by every one interested in education or in children. Besides the very full and interesting reports on Medical Inspection in Schools, to which we refer in another column, the March number has an article on Feeble-Minded and Backward Children, an account of the Housewives' League of the United States, and an address on children's health by Dr. Bech of South Africa, that ought to be read by every mother of school children. This is by no means a complete list of the contents of this most valuable magazine, which we should like to see in every household in Canada. The April number will discuss fully the problems of the feeble-minded. [Toronto, \$2.00 a year, 20 cents a copy.]

OFFICIAL NOTICE.

Teachers are requested to observe carefully the provisions of Reg. 20 (1) (3) with reference to May 23 and 24, which fall upon Saturday and Sunday respectively, this year.

The exercises in connection with Empire Day, will be held upon Friday May 22, Victoria Day falling upon Sunday will be observed as a holiday on Monday, May 25.

W. S. CARTER,
Chief Superintendent of Education.

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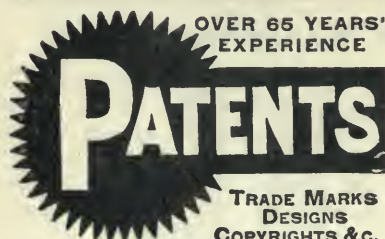
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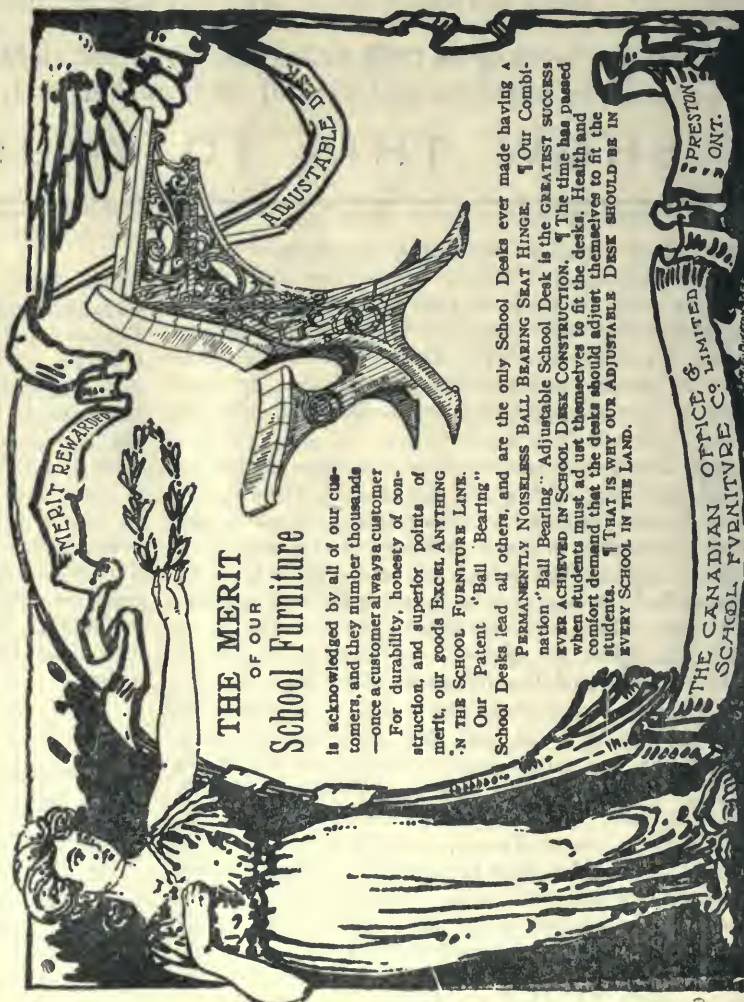
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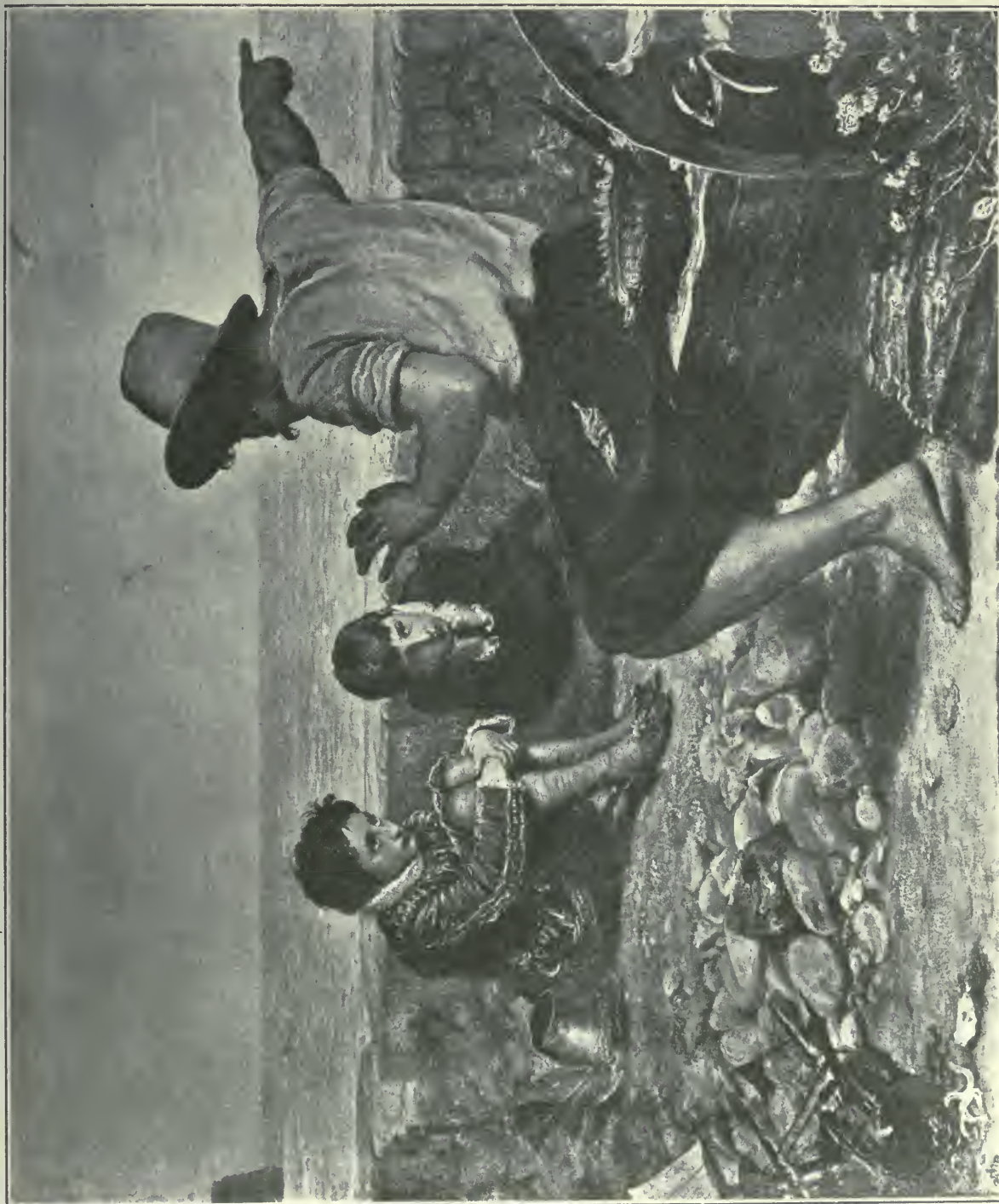
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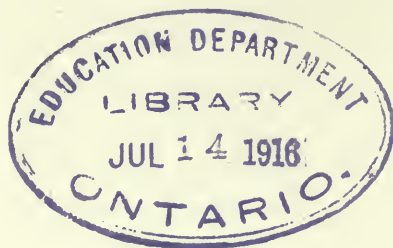




THE BOYHOOD OF SIR WALTER RALEIGH

Sir John Millard, 1829-1896

"Dreaming, as boys and poets only dream
With those that see God's wonders in the deep."



Educational Review.

Devoted to Advanced Methods of Education and General Culture

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SIR WALTER RALEIGH.

Our picture supplement this month is a reproduction of Sir John Millais' famous picture, "The Boyhood of Sir Walter Raleigh."

In 1552, fifty-five years after John Cabot had set up the flag of England on the American continent, Raleigh was born on the south coast of Devon. He grew up in a time of discovery and exploration, and in a land of famous sailors and explorers, the land of Drake and Hawkins and Sir Humphrey Gilbert, the land of which it was said that when Queen Bess was in doubt or her country in trouble, "She was wont to send for a Devon man, sir."

In the picture we see two boys sitting on the shore and listening to the tales of a sailor. The storyteller's back is turned to us, but by his attitude and gesture we know the force and interest of the story, which fascinates one lad, and keeps his eyes fixed on the sailor's face. But Raleigh is thinking not only of what man has done, but of what man will do, and he is looking far out across the sea, as if he already saw the land of his hopes and dreams.

He seems to have been the first great man to realize that the New World was not merely a stepping stone to India, or a battlefield with Spain for gold, but that there should grow up a Greater Britain across the seas. That is why we count him among our Empire builders, although his attempts to found a colony failed, and the country that he named for his Queen is no longer under the British flag.

In 1584 Raleigh sent an exploring expedition to the eastern coast of North America, and the country over which the Queen had made him Governor was named Virginia.

In 1585 he sent out men to make a settlement; but they were not fitted for the task, and returned to England. In 1587 he tried again, but this attempt failed also. Raleigh had to give up his plans for Virginia, but he did not lose his hopes. He said, "I shall live to see it an English Nation." And he did live to see an English settlement established in Virginia in 1607.

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When a change of address is ordered, both the NEW and the OLD address should be given.

If a subscriber wishes the paper to be discontinued at the expiration of the subscription, notice to that effect should be sent. Otherwise it is assumed that a continuance of the subscription is desired. It is important that subscribers attend to this in order that loss and misunderstanding may be avoided.

The number accompanying each address tells to what date the subscription is paid. Thus "325" shows that the subscription is paid to May 1, 1914.

Address all correspondence to

THE EDUCATIONAL REVIEW,
St. John, N. B.

"Chou who of Thy free grace didst build up this
Britannick Empire to a glorious and enviable height,
with all her daughter Islands about her, stay us in
this felicitie."—John Milton.

THE FLAG.

All the boys and girls in our schools learn that the Union Jack is made up of the three crosses of England, Scotland and Ireland, and is thus truly the flag of the Union. In one sense, then, they learn the meaning of the flag. But are we as careful to teach them the uses of the flag, and how they should treat it?

What does the flag stand for? It is the outward sign of the authority of our country. Wherever the flag of the Empire flies, it says, "Here is something belonging to the Empire, which the people of the Empire have undertaken to protect." Wherever the flag is lowered, or taken away, it is a sign that our country has no longer the power or the will to rule or protect in that place.

It is a reminder of the many brave men, who have fought under it, and for it. It is the symbol of our loyalty to our King and Country.

In itself it is nothing, but as the outward sign of all these it is a sacred thing. Are we careful to treat it with due reverence?

A few years ago, during a procession through the streets of a Canadian town, a small torch-bearer was seen trying to set fire to a corner of the flag, that hung within reach of his torch. What had he been taught about respect for the flag and for what it represents? After a public holiday or patriotic celebration, it is no uncommon thing to see tawdry little flags lying about on floors or pavements, and the use of these in cheap decoration naturally tends to bring them into contempt. This is not a right use for the flag which is hung in churches as a sign of loyalty and devotion to a principle. And what about some of the flag-drills and games with flags, that are suggested for school use? Do they all conduce to respect? We fear not. Teach the children that the flag is too sacred to be used as a plaything.

For Honour, not honours.

Let all good things await,
Him who cares not to be great,
But as he saves or serves the state.

The Throne is established by righteousness.

Blessed is the nation whose God is the Lord.

SUMMER SCHOOLS.

The Calendars of the Summer School of Science and of the New Brunswick Summer Rural Science School have been received.

The first named school meets this year under new conditions. United with the Prince Edward Island Teachers' Summer School, it will hold its session under the auspices of the P. E. I. Department of Agriculture. By this arrangement, tuition in all the regular courses is offered free. Special attention will be given to Nature Study and Agriculture, but other subjects are not slighted. Many of our readers will be interested to know that the course in English Literature will be taken by a specialist in that subject, and that particular attention will be given to methods of teaching prose selections. The reading includes The Essays of Elia, Macbeth, and The Lay of the Last Minstrel. We can assure teachers of this subject that the course will be both interesting and profitable.

The accommodation at the N. B. Rural School to meet at the New Vocational School at Woodstock, July 8, to August 5, is limited to ninety, and nearly as many applications have already been received. Travelling expenses of students will be paid upon conditions stated in the Calendar. In addition to courses in Agriculture, a Domestic Science Course is offered, including instruction in Cooking, Sewing, Sanitation, Hygiene and Home Nursing.

We have also received the Calendar of the McGill University Summer School for Librarians, to meet from June 24 to July 24.

CITIZENSHIP.

"The science of citizenship if taught in our schools would turn out men and women with patriotic ideals of public duty, would make it impossible for unworthy men to reach high places. Without the science of citizenship we can never attain national greatness, provincial importance or civic advancement. The place where citizenship should be planted in the heart of every boy and girl is at school. There an understanding should be born, showing the duties each owes to his neighbor, the community he lives in and the country to which he owes his allegiance."—Major G. W. Stephens, in a patriotic address at McGill College, Toronto.

CENTENNIAL ANNIVERSARIES OF THE
WAR OF 1812.

J. VROOM.

XXII.—A Landing On the New England Coast.

June 14.—The month of June was chiefly marked by preparations for the final conflict on the Niagara frontier. The leaders of the war party were still in power in the United States, but they were making overtures for peace. There had been great changes at home and abroad since they so lightly issued their declaration of war two years before. They had found war to mean something more than a series of raids on the Canadian border, which at the end of the two years had resulted in nothing gained; something more than a succession of stirring naval duels, which at best made no noticeable difference in the strength of the British fleet.

In 1813, British squadrons from Bermuda and the West Indies had made hostile visits to some parts of the Southern States, compelling the militia to organize for the defence of their own shores. There was danger of an uprising of slaves to help the British; and it was suspected that this was one of the objects which the British had in view. The absurd blockade of the whole Atlantic coast maintained by a few British ships in 1813 had been relaxed during the winter; but it had been renewed with vigor in the spring, and was no longer absurd. The commerce of the blockaded ports was completely destroyed. They had not a merchant ship afloat. The cruisers, of which they had been so proud, were confined to port; or, when they could get out to sea, were no longer able to bring in prizes because of the blockade. All their triumphs had been at sea, and the sea was closed against them.

There were public rejoicings in New England when news of the fall of Napoleon was received; for there the peace party was in the majority, and thought that peace would come all the sooner with British ships and British regiments thus set free to take part in the war in America. War, instead of bringing the people of the country together to withstand a common enemy, was dividing them; and not the least of the troubles which had to be faced by the party in power was a threat that New England would secede from the Union if the war were prolonged.

Thus was the Washington government situated when it finished its preparations for the campaign of 1814. There was then no hope of conquering British America. The war must come to an end without that; yet they hoped to drive the Canadians back across the Niagara, and to gain some foothold on Canadian soil before the peace was concluded, that they might thereby be in a position to obtain better terms. Therefore they sent their best leaders and their best battalions to Niagara. The invading army of 1814 was to be a well disciplined soldiery, very different from the unmanageable troops of former years.

The Canadians, greatly exhausted, and near the end of their resources both in men and in means, were not as well able to meet the foe as they had been at the first onset; yet, knowing that ample reinforcements were now on the way from England, they could but try to hold their own until the sorely needed help should come.

Hitherto New England, while it had suffered the most from loss of commerce because it had the most to lose, had escaped direct attack. This immunity was at an end. On the fourteenth of June, boats from British ships in the offing made a landing at Wareham, Mass., where several vessels and a factory were burned. The unexpected attack gave rise to fresh alarm. It marked a new departure in the British plan of campaign; and shewed an intention of hastening the end of the war by carrying it into the enemy's country, and of relieving the pressure at Niagara by threatening the whole Atlantic coast.

PRAYERS.

God who created me
Nimble and light of limb,
In three elements free,
To run, to ride, to swim:
Not when the sense is dim,
But now from the heart of joy,
I would remember Him:
Take the thanks of a boy.

Jesu, King and Lord,
Whose are my foes to fight,
Gird me with Thy Sword
Swift and sharp and bright.
Thee would I serve if I might,
And conquer if I can;
From day-dawn till night,
Take the strength of a man.

—Henry Charles Beeching.

BOTANY.

L. A. DEWOLFE.

A recent request was, "Give a list of Nature Study topics for the spring months." An answer to that would not necessarily belong under the heading "Botany." Yet, what's in a name?

The briefest answer is, "Study whatever chances to come your way." Nature work should be informal. When one outlines a list of topics and tries to follow that list, one has ceased to be a teacher, and has become a machine. There are too many "machines" trying to teach now. Get away from the mechanical. Be natural.

If a boy brings in a butterfly today, have a lesson on it. If he bring a fungus tomorrow, a lesson on that is in order. To be sure, the butterfly and the fungus are not closely related; but they may be found side by side in the field. If they accidentally be found together, why can we not study them together?

Nature study is not the classification of objects according to evolution or according to relationships. That is a science, which follows later.

But the one who has never learned to see things in the field is not satisfied with these generalities. She wants to be told what to look for. For the sake of peace, therefore, I'll suggest a few of the things to watch for and have the children watch for.

One of the first signs of spring is the bird migrations. In connection with that, discuss why birds migrate, and where they go. Why do they not all migrate? Some remain with us the year through. Is it a matter of cold or lack of food that drives them south in the fall? Why do they probably return in the spring. Read about migration in some good Bird Book.

Learn to identify the birds as they come in the spring. Keep a record of the dates of their appearance. Try to find out their proper names. Don't continue to call all sparrows "little grey birds." Don't call the Junco "the bluebird." He is not blue. Find out what they eat, where and when they nest, and anything else about their habits.

Watch for the first butterflies, houseflies, and other insects. Where did they spend the winter? The earliest butterfly will probably be the Mourning Cloak. It slept through the

winter in the adult form. House-flies do the same. Comparatively few insects, however, do this. Look for cocoons and insect eggs. Read about life histories of insects in some good Insect Book.

Then try to find the things you read about. Possibly you can discover a few details the book did not mention.

Snakes, frogs, toads and salamanders also afford good subjects for study. Where and how did they spend the winter? Find tadpoles (pollywogs) of as many sizes as you can. Bring frog's or toad's eggs into the school-room and watch them hatch.

Minerals can be studied at all times. There is no more reason for studying them in the spring than at any other season except that building operations may suggest a reference to them. For example, cement, concrete, mortar, brick, and slate might lead to a study of the gravel of a river bed, limestone clay, etc. Besides, every country boy goes fishing in the spring. When he ties a stone on his line for a "sinker," would it be wise to find out all one could about that stone? If he uses tea-lead, that will stand inquiry too.

Farm animals are always interesting. In spring, however, the young lambs, pigs, calves and chickens give an added interest.

Fur-bearing animals are the centre of interest in these provinces. Let your boys find out all they can about rearing them in captivity.

Garden operations offer a very large range of topics. Removing the winter covering from strawberries and perennial flowers; the digging of the ground; the making of hot-beds and cold-frames; the importation of fruit-trees; grafting and pruning; seed-planting—these and dozens of similar topics will suggest themselves to the wide-awake teacher. Possibly she does not know much about them; but if she is really anxious, she'll find out something of value. If she is not anxious, her boys will probably play truant. I haven't much respect for them if they don't.

But thus far, this is not Botany! Well, there is a big out-doors not included in the foregoing. There is plenty of botany there. Study the spring awakening of plant life. Watch the swelling and unfolding buds. What is in them? What are the ten earliest flowering plants in

your section? How many of them grew in the woods? What are the five earliest flowering forest-trees?

Begin a collection of pressed plants. Arrange them according to their botanical families. Make a collection of galls. Also, collect the insects that come out of these galls. Collect twigs of our native trees. Collect evergreen herbs. Collect mosses and ferns. Study your collections. In short, study Nature. The collections are of secondary importance. Hold a local school Fair at any convenient season, and exhibit your collections. Parents will be interested in seeing them.

NATURE STUDY OF ANIMALS.

H. G. PERRY.

Attractions of Birds.

Our spring migrants are returning, and many of them are already selecting sites for their summer nests. If you wish to have them locate near your home or school now is the time to advertise. In general they choose a place with trees and shrubbery, and are fond of hedges, particularly if they are evergreen. The arbor vitae and spruce hedges are among the best, for they give protection to both summer and winter birds.

Given general conditions, it takes but little extra thought and effort to attract birds around a place, and even then you are the gainer, for through their cheery manner, merry song, and the fun of watching their peculiar little habits, they more than repay you a hundred-fold; not to mention their great economic value in keeping down insect pests, and, in the case of the purple martin and King bird, in driving off crows, eagles and hawks. Among the more simple artificial devices for their attraction may be named protection, food and feeding boxes, bird baths and drinking places, and houses and holes for nesting in.

Protection is a prime necessity. Birds must be made to feel your friendship, and to know that no harm will come from you or your home. If you cannot claim their confidence all your efforts will be vain. Nothing in the line of attractive premises will compensate for the presence of a vicious cat in the back yard.

The best bird students recommend turning the cat into fertilizer, and that you warn your cat-keeping neighbors that all trespassing cats will go the same way. The red squirrel is another animal that should be banished from your lot. Even the small boy must be taught to respect your friends. The people most successful in attracting birds and animals are very careful to win and keep their confidence.

Food and feeding boxes are also among the necessities. There are many kinds of feeding devices recommended by bird students, varying somewhat for different species, and ranging from food scattered on the ground, or on the top of a packing case, to the weather-vane house, so contrived as always to shelter feeding birds, and the automatic food bell, designed by the German bird lover, Baron von Berlepsch. A good simple device is a board about sixteen inches square, with raised edges, fastened to the top of a post, about five feet high. In feeding put out a variety of food, allow none to become stale. Note the kind of food each species prefers. By using several small feeding boards each with a different food you will soon be able to learn their likes and dislikes.

A good bird-bath and drinking fountain (for they bathe and drink in the same dish) is made by placing a shallow dish of water upon a support about five feet high. A large flower-pot saucer makes a good dish. Fasten to the supporting post the branch of a tree so that it extends up alongside and above the bath; this is a kind of "bathing house at the beach," where they prepare for the dip, and later arrange their toilet. Watch them. Notice how often they drink and bathe during the day, and what satisfaction they seem to take in the bath. Change the water daily, be observant, and you will soon find out things not recorded in books.

Bird houses of necessity vary with the varying habits and size of different species. The "martin house" is a familiar object, in many parts of our provinces. The purple martin appreciates this thoughtfulness and returns year after year to his summer home. Each room should have a floor space about six inches square, and a height of eight inches, with a door about two inches in diameter. Similar houses with the door about an inch and a quarter in diameter will be occupied by the tree swallow. The

small door keeps out such birds as the English sparrow, etc.

It is also quite common in many sections to find barns with a narrow strip of board-nailed under the eaves to aid in supporting the mud-built house of the cave swallow. Try it this year on a barn facing east and west, and note the results. These birds literally sweep the air, devouring insects by the thousands. Are they of benefit to the farm?

Many other birds also appreciate houses. The robin seems to prefer a shelf-like house, a piece of board with raised edges, or a shallow box about six inches square, with sides not over two inches, fastened several feet from the ground in sheltered places against buildings, or among trees. Some bird students tell me that they even place straw in these houses, and that it seems to serve as a special attraction. Several such houses can be made in a few minutes and should be in position as early as possible.

Place on your lawn a "mud pan," a shallow pan filled with mud and water, and note what birds use this mixture. Examine old nests to find its use. Wool, cotton, feathers, and other materials are used when available.

Houses for the downy woodpecker are made by taking a section about sixteen inches long from the trunk of a tree about eight inches in diameter, and digging out a hole from one end about nine inches deep, with the diameter, for over a third of its depth, in the mouth region, of about five inches. Fit a board over this, hollowing it out to correspond with the width of the hole at the mouth. Now set the house upright, the board end being the bottom, and in the side, eight inches from the bottom, bore a hole for a door, one and four-fifths inches in diameter. Make the interior fairly smooth, free from splinters, nail the bottom in place, and fasten the house door end uppermost to a post or tree, with door facing the east, and that side inclined about four degrees towards the ground, to prevent rain from running in. This is a good imitation of the famous German Berlepsch bird house, and I have known downy Woodpeckers to seem very happy in such quarters. A smaller house made in the same way, with the door about an inch and a quarter in diameter serves equally well for the chickadee. They like such homes.

I believe much could be done to attract the flicker. They are frequently found nesting in quite unexpected places. Given proper tree conditions I have known them to build in towns, in trees within ten feet of the side walk, and they seemed to have little fear of man after they once found that he was merely a "curious" animal.

"Mr. Ernest Thompson Seton has constructed in his place in Connecticut a huge artificial stump, filled with imitation woodpecker holes," and has succeeded in attracting numbers of different kinds of birds.

In constructing a flicker house, follow the general directions for the woodpecker house, only make it larger. The door should be about two and a half inches in diameter.

Many other species, as song sparrows, chipping sparrows, cat-birds, King birds, redstarts, etc., etc., that join your colony will prefer to keep their nests out of prepared houses. The English redstart, however, has been known to build in a house similar to that described for the robin, with walls about four inches high on three sides, with a low front, and provided with a flat roof. It might prove interesting to provide such houses for our native redstart.

Here is a hint; why not get busy preparing bird attractions for your school grounds, and make their erection a part of the arbor day exercises? The planting of trees, shrubbery, flowers, etc., are right in this line of work, and the erection of feeding boards, baths, and houses are a natural sequence, and quite in keeping with the spirit of the day. Try it; it is worth while, it will pay!

Space prevents the publication of data on the return of the migrants for April, but they will appear in the June issue along with the data for May. Let me urge again to have data for May sent in by the 25th. If you mail by that date there will be ample time to prepare copy for the June issue. This is the great month for birds, but make it even greater for your bird study.

When boys and girls salute the flag, they do not merely express their pride that it is a flag honored over the world. They ought to remember that the flag represents the country to which they owe duties in every hour of their lives. All the time they are receiving blessings from that country, and all the time they have duties to that country. — EDWARD EVERETT HALE.

PRIMARY NUMBER WORK.—Continued.

GERTRUDE COUGHLIN.

In teaching addition in Grade II, use the combinations learned earlier. For example, they have learned

$$9+2=11$$

$$8+3=11$$

$$7+4=11$$

$$6+5=11$$

When they see a $9+2$ they have a mental picture of 11. Now teach that a $9+2$ or a $2+9$ always give a 1, that is when given $19+2$, they must think of the next number ending in 1. Lead them to see the number is 21. As busy work have them make a list of the numbers ending in 1 that come after 29, 39, 49, 59, 69, 79, 89, 99. Then have the class write the numbers ending in 1 that come after 22, 32, 42, 52, 62, 72, 82, 92. A number drill on the nines and twos is now in order, e. g.,

$$19+2 \quad 62+9$$

$$12+9 \quad 72+9$$

$$49+2 \quad 89+2, \text{ etc.}$$

The numbers ending in 2, 3, 4, 5, 6, 7, 8 and 9, may be taught in the same way.

Subtraction is taught directly from the addition table. Ask for two numbers that when added will give 13. You may be given $9+4=13$. Put it on the board in the following way:

$$\begin{array}{r} 9+ \\ 4 \\ \hline 13 \end{array}$$

Now let us take 4 away from 13 by erasing the 4. What have we left? Ans. 9. Ask a pupil to name the number that was taken away from 13. He will answer 4. What have we left? Ans. 9. Now put it down as a question in subtraction

$$\begin{array}{r} 13 - \\ 4 \\ \hline 9 \end{array}$$

Follow this up by taking 4 from 23; 4 from 33, etc. Then $13-9$ will give a 4, because $9+4=13$; $23-9$ will give 14 because 14 is the 4 below 23. In subtraction lead them to think that they must look for the 4 that comes below the number.

As busy work have 4 subtracted from all numbers ending in 3, and 9 subtracted from all numbers ending in 3. You see I have chosen 13 as an illustration; the idea may be utilized in all subtraction work.

It is in the second grade that multiplication is begun in earnest.

The class has built up the table of twos as far as $5 \times 2 = 10$. They will readily add a 2 to 10 to obtain 12. Well, then, how many twos to make 12? Ans. 6. Have this added to the list they have. Add 2 to each result until the class have built the table to $12 \times 2 = 24$. Follow this by questions in multiplication using 2 as a multiplier,

e. g.,

$6 \times$	$3 \times$	$9 \times$	$10 \times$	$12 \times$	$7 \times$
2	2	2	2	2	2
—	—	—	—	—	—

Division is taken up as soon as the multiplication has been mastered. Divide the even numbers first. That is $2)4 \div$ $2)8 \div$ $2)12 \div$ $2)2 \div$

As has been previously stated lead them to see 4 divided by 2 will give 2 because 2 is multiplied by 2 to obtain 4. Next divide the odd numbers by 2. Drill in the idea that the only remainder that is left when a number is divided by 2, is 1. Each table is taken up in this way. In each case teach that the remainder must be smaller than the number by which the number is divided.

After the tables of 2, 3 and 4, have been learned, drills may be commenced.

MULTIPLICATION DRILLS.

1. Have a pupil choose a number. He tells the class it may be divided by 2. The class are to guess what number he has chosen. He calls on the pupils who have raised their hands, until he calls on one who guesses the right number. The pupil will answer in this way. 14 divided by 2 is 7. No. $22 \div 2 = 11$. No. $16 \div 2$ is 8. Yes. The last pupil chooses a number. Perhaps one that may be divided by 3.

2. A child represents a number; e. g., he represents 8. He tells the class that the number he stands for may be divided by 2 and by 4. The child who guesses may choose 12. He tells the class the number is divisible by 2, 3, 4, 6.

3. Each child has a box and nine two-inch squares. The child puts a number on each card, using the numbers from 1 to 9. These are to be used in class. The cards are mixed up. The teacher chooses a pupil and then a table. She may choose 3. The pupil picks a card from his box and gives the product when multiplied by 3. For instance, the card he selects has 8 on it and he answers 8 multiplied by 3 is 24. The next may

be 6. He answers 3 multiplied by 6 is 18. When he has selected all the cards choose another pupil and change the table. If he fails to answer correctly, call on a second child, who draws from his own box.

4. A child chooses a card and comes to the front of the room. He shows his card to the class. The number on his card is 5. He says to a pupil, "If you multiply the number on your card by 5 what will you have?" The pupil answers 20. "Then your card says 4." To another, "If you multiply your number by 5 what will you have?" 45. "Your card says 9."

5. Have two pupils arrange their cards in the same order along the ledge of the board. Each child takes a piece of chalk. Above the figures write the answers when the numbers on the cards are multiplied by 3, 4 or 5. They begin at the word "Start." The work must be neat and accurate.

6. **When all the tables have been learned.** Two children bring their boxes to the front of the room. Each one takes a card from the box. The class multiply them together. The teacher makes a list of the answers. When the cards are used the work is corrected.

7. Children arrange the cards in order on the desk. The teacher tells a story. Jean had a birthday on Friday. She was 2×3 years old. At 2×3 hands are raised to answer 6. Her mother said she could have a party, and invite 4 times 6 children. Hands to answer, 24. Jean picked 7×8 apples for them to eat. Hands to answer, 56. She got 20 divided by 5 handkerchiefs. How many handkerchiefs, John? *John*.—Jean got 4 handkerchiefs. She has 21 divided by 3 hair-ribbons. Reta will tell you how many ribbons, *Reta*.—She has seven hair-ribbons. How many presents had she now, Alice? "She has 12 presents now." You may go on with the story at any length.

BUSY WORK ON TABLES.

1. 1 table has 4 legs.
3 tables have.....legs.
9 tables have.....legs.
12 tables have—.....legs.
2. 1 bird has 2 wings.
11 birds have.....wings.
8 birds have.....wings.
6 birds have.....wings.
3 birds have.....wings.

3. 1 clover has 3 leaves.
10 clovers have.....leaves.
12 clovers have.....leaves.
7 clovers have.....leaves.
9 clovers have.....leaves.
4. 1 dress has 8 buttons.
4 dresses have.....buttons.
6 dresses have.....buttons.
10 dresses have.....buttons.
12 dresses have.....buttons.
5. 1 hen has 7 chicks.
4 hens have.....chicks.
8 hens have.....chicks.
9 hens have.....chicks.
6. 1 house has 9 doors.
6 houses have.....doors.
3 houses have.....doors.
11 houses have.....doors.

Put a list of numbers on the board. Have the pupils multiply each of the numbers by their age. By the number of windows in the room. By the number of desks in a row. By the number of boys in a row. By the number of girls. By the number of fingers on one hand. By the number of panes of glass in a window.

FOR THE BLACKBOARD.

Nelson's signal as the Battle of Trafalgar was first put on a slate as follows:—

VICTORY.

England.....	253
expects.....	269
every.....	261
man.....	471
will.....	958
do.....	220
his.....	370
d 4, u 21, t 19, y 24.	

The numbers on the slate were shown by flags hoisted on the mast, and by this means the message was conveyed to all the ships in the fleet.

To build up and develop a high type of civilization for itself is but part of a nation's duty. Its higher work lies in the *extension* of the peace which it enjoys and of the freedom, which it has inherited.

THE SUMMER SCHOOL OF SCIENCE.

TO THE EDITOR OF THE

EDUCATIONAL REVIEW.

DEAR MADAM:—

As the value of the Summer School of Science for the Maritime Provinces is unknown to many teachers, trustees and ratepayers, I am writing briefly to tell of some ways in which I have found it helpful.

It gives us a chance to make ourselves more proficient in many branches of study. It helps us to keep in touch with all new methods and lines of work. It rests us from our regular school work, and at the same time inspires us with zeal for the future. Association with so many instructors, teachers, and the best people of the town, does much towards setting and keeping us up to high standards of work, and making us realize the great influence for good which we may exert upon our country.

I do not know of any place where we can spend a part of our vacation and so thoroughly enjoy and improve ourselves morally, mentally, socially and physically as we can at the Summer School of Science. The special church services; the systematic, instructive and interesting courses of study; the excellent evening lectures; the profitable field excursions; the pleasant "At Homes" of the town; the driving, boating and motoring parties, with other forms of recreation, all contribute to send us back to our work better teachers.

The Agricultural course is an inducement to many to attend. The winning of scholarships helps to defray the expenses of some. Quite a number of these have already been promised, and more are likely to be given. The school, which meets next July at Charlottetown, P.E.I., is charging no tuition fee this year.

ELIZABETH WETMORE.

Righteousness exalteth a nation.

A great Empire and little minds go ill together.

Follow the Christ, the King,
Live pure, speak true, right wrong, follow the King —
Else, wherefore born?

"On God and God-like men we build our trust,
Let all the ends thou aim'st at be thy Country's, thy
God's, and Truth's.

HOW TO STUDY THE ESSAYS OF ELIA.

(Continued.)

Mackery End, in Hertfordshire.

In preparation for studying this Essay, read *Blakesmoor in Hertfordshire*, and the description in *Dream Children* of the house that was cared for by Lamb's grandmother Field. *My Relations*, in which Elia's brother and sister, John and Mary, are spoken of as James and Bridget Elia, will have been studied already. So that we know something of the ties of family affection that bound him to Hertfordshire, and of his devotion to his sister. In "Old China" we read again of their "housing together in a sort of double singleness." Note that nearly half of the essay is given to a description of Bridget. Study this description until you get a clear picture of her. Notice how it is conveyed to us, very largely by contrast, not only contrast between brother and sister, but of quality with quality, as in the last half of paragraph 4. Her "presence of mind—less seasonable." About what might some of the "occasional bickerings" have arisen? Pick out one sentence or phrase which expresses the writer's satisfaction with his sister's character.

The paragraph beginning "In a season of distress," leads up easily and naturally to the ostensible subject of the essay, "best, *when she goes a journey with you.*" "*We made an excursion together.*" Then follows: The explanation of their interest in and connection with, Mackery End. The journey. Their differing impressions at first sight. Their reception.

We feel the tone of affectionate pleasure that prevails all through the essay. It shows the author's strong family affection, his grateful recollection of kindness, and his loving admiration of his sister. Notice how free his expression of feeling is from anything like sentimentality, and the tender tone and beautiful wording of the closing sentences.

Explain, "beyond the period of memory." Have you in your own mind any picture of a place or person that you have seen, but would have forgotten, had it not been kept before you by some one else? Have you ever had an imaginary picture of a place that looked very different when you came to see it? Why should relations have "occasional bickerings?" Explain the following words and phrases, *as they are used in this essay*, and use them in sentences of your

own: bicker, abstracted in, assiduously, accidents, bizarre, foibles, derogatory, to beat up the quarters, homely. What sort of person is good "to be at play with, or upon a visit?" or, to go a journey with? Comment on: "Those slender ties * * * loving Hertfordshire." Write a paragraph on "the tastes and habits" of Lamb and his sister as recorded in "Old China." Do you find any language in the essay reminiscent of one of the psalms?

Miscellaneous Questions on the Essays.

1. The titles of the Essays. Do they usually name the subject clearly? What are the two races of men? Name two of the "Old Benchers" and two of the "Old Actors." Where and what was the South Sea House? Christ's Hospital? What was Lamb's connection with each? Of which of his "Relations" does he write in "My Relations?" Where is Mackery End and who lived there? What is the name of "My First Play?" At what theatre was it played? How old was Lamb at the time? Name the "Dream Children." To whom was the letter on "Distant Correspondents" addressed?

2. In which of the essays do we find the following anecdotes: The giving of the plum-cake to the beggar? The Bank Clerk's Legacy? Lamb's fall on the slide in Cheapside? The dispute over the bill at the Andover Inn?

3. What and where are: Cam and Isis? The Bodleian? The Inner Temple? Stonehenge? Covent Garden? Smithfield? St. Albans?

4. In what connection are the following spoken of: The Interpreter at the House Beautiful? Those cates which the ravens ministered to the Tishbite? Caligula's minion? Some solemn *auto-da-fe*? Our little Goshen? The plains of Salamanca? The story of Hugh of Lincoln? The penalties of Lazarus and of Dives? The tedious shores of Lethe? The witch calling up Samuel? Explain the reference in each case.

5. Name six authors contemporary with Lamb, underlining the names of any spoken of in the essays. Name two of his favorite books, giving the authors. Write a brief note on Samuel Taylor Coleridge. From which of Coleridge's poems does Lamb quote? From what other poets does he quote? What books does he recommend to his readers? What does he say about magazines? What magazines were published in his time? Are any of those still in existence?

6. Finish the following passages: "Antiquity, thou wondrous charm,——;" "Sun and sky, and breeze, and solitary walks,——;" "Her education in youth was not much attended to,——;" "Fantastic forms, whither are ye fled?——;" and how, when he died, though he had not been dead an hour,——;" If thou meetest one of these small gentry,——." Or, quote any other three passages that you have committed to memory.

7. What was the celebrated *wish* of Sarah Battle? What three topics does epistolary matter usually comprise? Who was Susan Winstanley, and how are women advised to imitate her? What is a sign that a man cannot have

a pure mind? Who was "*the strangest of the Elias*?" What is a "profanation of the purposes of the cheerful playhouse?" What songs never failed to move Lamb's heart? What four men were "the greatest borrowers in all ages?" Who might have sat to a sculptor for an image of welcome? Who was in some things "behind her years?"

8. Show by quotations that Lamb was familiar with the Bible, with Shakespeare, Milton, and Spenser; and that he had read Virgil. What were his feelings towards Quakers, and in what different essays does he write of them. Quote two or more passages expressing strong family affection. Which essay is written in the simplest words? Is there any reason for this? What were Lamb's feelings or opinions about: Novelties, Scotchmen; grace before meat; bells; minced veal; narratives; "strangers or out-of-date kinsfolk?" For what special quality did he choose his friends and his reading? Can you think of any reason why his mother is the only one of his own family of whom he has not given us a description? (Canon Ainger suggests "the painful memories it would have brought to his sister)."

9. Fill in, verify or comment upon these quotations from Canon Ainger's chapter on the "Essays." "There is no poet he loves better to quote than——." "Of all old writers, the author of the—— appears oftenest, in quotation or allusion, in the *Essays of Elia*." "There are perhaps few English writers who have written so differently upon different themes." "With the addition of a few names and dates, a complete biography might be constructed from the *Essays* alone." "Lamb had a love of mystifying and putting his readers on a false scent." "He is an egotist, but an egotist without a touch of vanity or self-assertion, an egotist without a grain of envy or ill-nature."

LANGUAGE QUESTIONS.

Nova Scotia, Grade V.

M. W. McGRAY.

1. Analyze:
Oh! I was at your house yesterday.
Tom's sister ate my large round apple.
Mary and Jane walked slowly down the long street.
2. Parse underlined words.
3. Compare little, good, pretty, bad, square.
 Give the principal parts of is, ring, cut, write.
 Give the plural of hero, mouthful, wharf, mackerel.
4. Make sentences using the following: an, and—
 off, of—to, two, too—distant, distance—hear, here—
 there and their.
5. Decline the personal pronoun.
6. Write a few facts about: Shakespeare, Byron, Tennyson, Scott, Dickens, Goethe, Howe.
7. Describe any picture in your School Reader that particularly interested you.
8. What girl won the Silver Skates? What boy? What did the Cratchit's have for Christmas dinner? Why "Tiny Tim?"
 Describe the Victoria Cross. How did Rob Roy escape? Why were they glad to hear the Pipes at Lucknow? How did Samuel Johnson repent?
9. Tell in your own words the story of Lady Clare, or the story of Laura Secord.

TEST QUESTIONS.

History and Geography.

The following questions are taken from different sources, chiefly from test papers set in the "School World," and from New Brunswick High School Entrance papers of past years.

1. State briefly but clearly the objects of the following: The Toleration Act, the Declaration of Indulgence, the Bill of Rights, the Test Act.

2. Tell the story of the Jacobite Rising in 1745. Which side would you have taken and why?

3. Show in two parallel columns the territories belonging to the British in 1688 and 1815, respectively.

4. State the *general* object of the great war in Queen Anne's reign. What is it called, and why? Why did England take part in it? In what different countries did the fighting take place? What did England gain by it?

5. Which of the Stuart Kings of England were ancestors of George V.

6. Write in three parallel columns:—

a. Any *ten* of the following place names.

b. Any historical event connected with them, giving dates.

c. Their location. Agincourt, Alma, Bannockburn, Beachy Head, Blenheim, Bosworth, Boyne, Cadiz, Canterbury, Crecy, Corunna, Evesham, Fotheringay, Guiana, Hastings, Lewes, Lucknow, Plassey, Potiers, Runnymede, Rochelle, Sedgemoor, Salamanca, Towton, Utrecht, Worcester, Sluys, Zutphen, Paardeberg, Londonderry.

7. When have England and France been leagued together, and against what enemies?

8. What do you understand by Responsible Government? When was it adopted in (a) New Brunswick, (b) Nova Scotia? What names are associated with its introduction in each province?

9. Give (a) the nations concerned; (b) the results, and (c) the dates of the various sieges of Quebec?

10. Write brief notes on *six* of the following topics: United Empire Loyalists, Exile of the Acadians, British North America Act, Rebellion in Canada, 1837-38, the Massacre of Glencoe, the Long Parliament, the Ashburton Treaty, the South Sea Bubble, the Feudal System, the Rye House Plot, Massacre of Lachine, the Family Compact, Star Chamber, Invention of Printing, Gordon Riots, the Reform Bill of 1832, Great writers of the Elizabethan Age, Siege of Sebastopol, the fall of Louisbourg, the Solemn League and Covenant.

11. What are the four most important trade routes from England to other parts of the Empire?

12. Name the zones of the earth and give their boundaries. Explain the terms:—glacier, tide, plateau, delta, trade winds, tropics, horizon, river-basin, latitude.

13. Name in consecutive order the waters through which you would pass and the British possessions you would pass in going from London to Yokohama, via the Red Sea?

14. Explain why clocks in London do not indicate the same time as those in St. John. Why do the clocks of Moncton and Fredericton keep the same time?

15. A steamer sails from Shediac, N. B., to Owen

Sound, Ontario. Name in order the waters she would sail on, and the chief Canadian towns she would pass.

16. Why is England a manufacturing Country? Name three chief manufacturers, naming two cities as centres of each.

17. Name eight islands separated from the mainland by straits. Name the mainland from which each is separated, and the strait.

18. Draw an outline map of any one of the sea coast provinces of Canada. Put in the coast waters, rivers and chief sea ports.

In giving practice in answering test questions, the questions requiring practically the same answers should be worded in different ways, to accustom the pupil to the questioning of different examiners—*i. e.* For what are the following men famous? Write brief notes on the following men. How are the following men connected with the history of Canada?

A familiar comment by examiners is—"Many candidates do not read the questions with due care, and others fail to answer the question actually set, but write at length on topics more or less closely connected therewith." To guard against these mistakes give both oral and written drill, or one or two questions at a time, insisting on the pupils explaining each question, before they begin the answer.

Other comments are: "In English History, attention is drawn to the following weak points. (a). Inaccuracy in dates; the attention is sometimes fixed on the last two figures to the neglect of the first two. (b). Vagueness in Geography; the map is an essential adjunct to the history lesson. (c). Wordy answering; either excess in trivial detail, or a notion that marks may be gained by mere verbosity. (d). Failure to discriminate between more or less important issues: *e. g.* in an account of a great man's life trivial matters about his youth are given as much space as the deeds that made him famous.

Practice should be given in writing "brief notes" as in question 10. These should be written on the black-board and criticised. Show that only the most important matters should be mentioned. Teach the importance of adding dates, approximate if not exact, as, about "the middle of the 16th century." "Just before the rebellion of 1837."

Attach a great deal of importance to neat and clear arrangement of answers. This conduces to clear thinking. It also makes things easier for the examiners, and pre-disposes them to favourable judgment.

THE FOLLOWING QUESTIONS WERE SET AS A TEST FOR A HIGH SCHOOL CLASS, IN THE STATE OF NEW YORK.

1. Add (no credit being given if an error is made in the work): 86792, 93576, 80947, 4856, 20493, 63049, 28937, 78967, 49485, 28390.

2. Multiply (no credit if an error is made): .769483 by 498.7.

3. Divide (no credit if an error is made) .967898 by 698.

4. A young man earns during his summer vacation \$76.50 which he deposits in the bank at $3\frac{1}{2}\%$. To how

much interest is he entitled at the end of five months?

5. How many windows must be placed in a school room 60'x35,' each window having 2½' by 8' of glass surface, if the ratio between floor surface and glass surface must be 5:1?

6. How much will three pounds six ounces porter house steak cost at 35 cents per pound?

7. If a senior class buys tablets at the rate of \$3.00 per hundred and sells them at the rate of six for a quarter, what is the gain per cent?

8. How many cookies can be baked in a tin 15 inches long by 12 inches wide, if the cutter is three inches in diameter?

9. If you were given a test of 40 words in spelling, what percentage would you make if you misspelled 13 words?

10. A man buys a grindstone in the centre of which is a wooden plug. Before he can mount the stone, he has to bore a hole in the wood which will be the exact centre of the stone. Tell how he can locate this centre. (No guess work will receive credit.)

This test must be completed in one hour's time.

QUESTIONS ON THE MERCHANT OF VENICE.

1. Name the Dramatis Personae, underlining the names of the four most important characters. In what different places are the scenes laid?

2. How many different stories are there in the play? Number them, and under each number write the names of the characters who figure in that story.

3. Quote the opening words of the play? Who speak them? In what frame of mind is he? Who else first appears in a corresponding mood?

4. Why did Shylock hate Antonio? Why did Portia have nothing to say to her English suitor? Why was Jessica sorry to have Launcelot leave their house? How had Bassanio disabled his estate? Who planned the elopement of Lorenzo and Jessica? Who promised to swear but now and then?

5. What person or persons speak in prose throughout the play? Complete one of the passages beginning, "In such a night," and give the occasion and the speaker.

6. Write brief notes on the following and quote, or give the substance of the speech in which they are mentioned: Nestor, Cato's daughter, Sisters Three, Thisbe, Alcides, Iason.

7. "We shall have old swearing.." Who says this? Was her prophecy fulfilled? Quote some of the oaths used in the play.

8. Of what service to the main story of the play are the following characters: Nerissa, Jessica, Launcelot? What would be lost if they were taken out of the play?

9. What do we learn from other people about Antonio's character? What does the first scene in which Portia appears tell us of her character? What had happened to her before the play opens?

10. Tell the story of the rings. Quote some of the puns made in the play. Write a note on Jessica as a daughter. Quote (or give the substance in your own words). Portia's speech to Bassanio, when he has chosen

the casket. Antonio's letter to Bassanio? Shylock's speech beginning "What judgment shall I dread."

11. Who says, and of or to whom: "———speaks an infinite deal of nothing." —— is kind enough, but a huge feeder. A kinder gentleman treads not the earth. You have a noble and a true conceit of god-like amity. The poor rude world hath not her fellow. Thou but offendest thy lungs to speak so loud. You teach me how a beggar should be answered. I would be friends with you and have your love. Yet I have not seen so likely an ambassador of love. We are the Iasons, we have won the fleece?

SEAT WORK FOR GRADES, I, II AND III.

1. Fill in blanks in words with correct letters as b—y.

2. Make all the words you can from the following letters: a, t, c, b, e, y, o, l, s.

3. Write words beginning with these letters: m, t, r, h.

4. Pick out all the words in your lesson containing 2, 3, 4 letters.

5. Fill in blanks in the following sentences: My apple is——.

6. Pick out all the words from lesson beginning with capital letters.

7. Rearrange these letters to form words: ktity, brid.

8. Write short stories about a bird, a girl.

9. Write sentences showing the meaning of: see, sea, be, bee.

10. Write a list of words you know from memory.

11. Cross out all the silent letters in a list of words, as love, lamb, take, bite, right.

12. Write all the words you know having these combinations: ight, ing, it, an, all.

13. Rearrange words to make a story, as: sky, blue, the, is.

14. Write simple stories.

15. Simple letter writing.

16. Make all the words possible out of thanksgiving.

17. Write answers to questions.

18. Write the names of all the people in your class.

19. If you had two dollars to spend, write a list of the articles you would buy.

20. Write by twos up to 100. Write from 1 by twos to 99

21. Draw the face of the clock, showing the hour you go home to dinner.—*Western School Journal, Winnipeg.*

SUGGESTIONS FOR EMPIRE DAY.

Empire Day exercises should be based on the work already done in Geography and History. The Empire is a geographical fact.

For a geography exercise, divide the school into sections and assign to each section a portion of the Empire as a subject. They may report in different ways, but it should be clearly understood beforehand what facts are to be reported. For instance, in the section that has Canada, one child may be given a province and expected to state briefly when called upon:—1. The position of the province. 2. The date at which it came into the Empire. 3. How it was acquired; by conquest, treaty, or purchase. 4. What is its value; for production or purposes of colonization. Or, instead of each pupil taking a province, one might take the latitude and longitude, another the climate, another the chief products, and so on, of the country as a whole. For each section appoint a leader who will be responsible. Let the pupils do as much as possible of the planning.

Another way is to divide the school into three sections, for the seventeenth, eighteenth and nineteenth centuries. Let them tell what parts of the Empire came in each century and give some of the suggested geographical details about each. These plans can be carried out in ungraded schools, for even the little ones can be supplied with a name and a date if nothing else, and they will be proud to contribute their items to the general report. If you have a wall map of the world, each place should be pointed out as mentioned. Another exercise in geography is a journey round the world, traced on the map, each pupil to take a certain section of the journey and to report especially on methods of transportation. Dr. Parkins' little book, "Round the Empire" is very useful for all this work.

The great cities of the Empire beginning with those of the United Kingdom, might be taken as a topic, each pupil to represent and give details about one city. The overseas cities in Kipling's "Song of the English" are Bombay, Calcutta, Madras, Rangoon, Singapore, Hong-Kong, Halifax, Quebec, Montreal, Victoria, Capetown, Adelaide, Melbourne, Sydney (N. S. W.), Brisbane, Hobart, Auckland. Others might be added or substituted.

Different plans may be devised from history lessons. The different battles by which parts of the Empire were won or saved; famous sieges, e. g. Gibraltar, Quebec, Louisburg; treaties such as the Treaty of Utrecht, which gave or confirmed certain possessions: All these may be reported on briefly.

Older pupils may study and bring to class, reports on great movements in the Empire, such as the movement to abolish slavery and the slave trade; the movement towards federation, as illustrated in Canada, Australia, South Africa; the movement for peace.

A most important part of the study of the Empire's history is biography. A writer in the *Round Table*, June, 1913, says; "There is no surer remedy for misconception as to the moral function of the British Empire than the study of the men who made its history." It is of the utmost importance that attention should not be concentrated on soldiers and conquerors, on brilliant exploits in battle, to the neglect of the heroes of peace. In a series of articles on "Master-Builders of Greater Britain," appearing in *United Empire*, there are included the following names: Sir Alexander MacKenzie, (1755-1820), explorer and discoverer of the MacKenzie River; John MacKenzie, (1835-1895), missionary and statesman in South Africa; Lord Selkirk (1771-1820), "who planted the first agricultural colony in the midst of the preserves of the fur traders and introduced a new element amongst the roving population of the West, which was to change the course of Canadian history;" Bishop Laval (1623-1708), "a great and creative founder of Canadian education," Bishop Selwyn (1809-1978), first Bishop of New Zealand, who brought Christianity and civilization to the Melanesian Islands and "to whom Governors looked for support and counsel;" Lord Durham, Governor-General of Canada, who prepared the way for the present self-governing dominions of the Empire," and Lord Elgin (1811-1863), Governor-General of Canada, Ambassador to China, Viceroy of India, of whom it is written, "at the cost of his life he sought peace. He had never faced an enemy in the battlefield, he had never thrilled listening senates by his oratory, he had never framed an instrument by government. But he had helped to make Canada one—one with herself and one

with the Mother Country. He had loved righteousness and hated iniquity." And to these names might be added many more. Besides great soldiers, like Clive and Wellington, Wolfe and Brock and Gordon; great sailors and explorers like Drake and Raleigh, Cook and Anson and Nelson; great statesmen and rulers, such as Pitt, Chatham, Salisbury, Cromer; recall the names of great writers, Shakespeare, Milton, Wordsworth, Tennyson; great missionaries, Moffat, Livingstone, Patteson, Bompas; great philanthropists, Wilberforce, Clarkson, Shaftesbury. Think of Florence Nightingale and Elizabeth Fry as well as of Lady La Tour and Madeline Vercheres and Laura Secord.

It is better to have the whole school, or a whole class take part in all these exercises than to have compositions read by a few. Have a roll call answered by the names of great men and women with one fact about each, or let the teacher give out a name and a boy or girl answer with a statement about the person named. The one statement or fact should be a significant one. It should answer the question, "What particular work did he or she do for the Empire?" or "What example did he or she hand down to us?"

A short, pointed, practical talk may be given by the teacher upon a subject suggested by an incident in the life of a hero, or by one or more of the mottoes given on another page. The lesson that we should chiefly seek to impress is that of Browning's Words:

"Here and here doth England help me,
How can I help England?"

The lesson of the duty of good citizenship as a debt of honour.

If the regular teaching of history and literature has led up to it, a discussion might take place to bring out the points: What are the bonds of unity between the different parts of the Empire? What traditions and examples have the great men and women of the Empire handed down to us? What does our country give us? (Peace, protection, Christian surroundings, education;—a great literature). What can we do for our country? Are we to take all and give nothing? What different kinds of warfare are there? Wars against ignorance, heathenism, oppression, love of gain, disease, etc. Give instances of fights against these, and

names of people who have fought such battles. What virtues do we need to practise to fit ourselves for such fighting?

A talk might be given on the picture supplement with its motto, linked with a few facts about Raleigh's attempt to colonize Virginia. His dreams of what he might do to make his country great beyond the seas, and to win glory for his Queen; were only partly realized. To him they seemed a total failure, but far more than he could have dreamed possible has come true since then. Try to imagine his thoughts as he listens to the sailor's tales and gazes out across the sea. What about our own dreams and plans? Are they all for ourselves, or like Raleigh's, for our king and country?

In the musical part of the programme, do not neglect the religious side of the day. Hymns for national occasions are to be found in some of our hymnals. All children should know Kipling's "Land of our Birth," which is number 696 in *The Book of Common Praise*, and may be sung to "Hursley," the tune of "Sun of my Soul."

On the singing of the national anthem, we are glad to quote and most heartily commend to the attention of our teachers the words of one of the Daughters of the Empire:

One suggestion I would like to make in connection with Empire Day exercises is this, that the children of the public schools be taught to sing "God save the King," as reverently as if they were uttering a prayer. It is a prayer to the Almighty to save and bless our King. Unfortunately the use of this beautiful anthem has become degraded and now it is only a signal for the close of a public meeting and the majority of people thoughtlessly raise neither heart nor voice to God for him, who in his high station and with his great responsibilities needs the prayers of his people. Let us redeem ourselves and teach the rising generation to sing "God save the King" in the proper spirit, and with the proper attitude. I trust your REVIEW will keep this idea before the minds of your readers.

In the primary grades, too much should not be attempted. In an ungraded school, the little ones may, as suggested already, take part in the general exercises and listen to the elder ones. In a primary room, teach what the Empire is:—all the countries ruled over by our King-Emperor. Show pictures of King and Queen and tell stories of their goodness and interest in their people. Teach the first verse

of the national anthem, if it is not already known, and impress upon the children the need of reverence in saying or singing it. Show the king's head upon coins and stamps. Teach the text, "Fear God, Honour the King."

If you have a British Empire map on the wall have the countries pointed out. Tell the children that they must look forward to learning about all the different parts of *their* Empire, and about the different peoples who live in it. Show a picture of children of the Empire of a different race and tell them that they have the same king that we have. Some day, too, they must hope to learn about the great men who have helped to make the Empire so great. Tell a story about some great man or woman and let the children re-tell it, and talk about it. Ask them what they would like to do for their country and their king. Then, how they can be getting ready now to serve their country by learning all they can and by being honest and truthful, brave and unselfish. Let them learn and talk about any of the easier mottoes.

[A useful little booklet, called *The Empire Day by Day*, compiled by Frank Wise, is published by the MacMillan Company of Canada.]

POEMS FOR EMPIRE DAY.

HOME THOUGHTS FROM THE SEA.

Nobly, nobly Cape Saint Vincent to the North-West died away,
Sunset ran, one glorious blood-red, reeking into Cadiz Bay;
Bluish mid the burning water, full in face Trafalgar lay;
In the dimmest North-East distance, dawned Gibraltar, grand and gray;
"Here and here did England help me: how can I help England"—say,
Whoso turns as I, this evening, turn to God to praise and pray,
While Jove's planet rises yonder, silent over Africa.

—Robert Browning.

1. *Cape St. Vincent.* In 1797 Admiral Jervis's fleet attacked the Spaniards off Cape St. Vincent, and through the skill and gallantry of Nelson won a decisive victory

2. *Cadiz Bay.* Cadiz was the headquarters of the French and Spanish fleets under Villeneuve during the naval operations of 1806, which ended in the Battle of Trafalgar. The allusion may be to Essex's attack on Cadiz in 1596.

3. *Gibraltar.* Besieged by the French, but, after a stubborn resistance, relieved in 1782 by Admiral Howe.

THE PRIVATE OF THE BUFFS.

(1859-1860)

(Sir Francis Hastings Doyle, 1818-1888).

Last night, among his fellow-roughs,
He jested, quaffed and swore;
A drunken private of the Buffs,
Who never looked before.
To-day, beneath the foeman's frown,
He stands in Elgin's place,
Ambassador from Britain's Crown
And type of all her race.

Poor, reckless, rude, low-born, untaught,
Bewildered, and alone;
A heart, with English instinct fraught,
He yet can call his own.
Aye, tear his body limb from limb,
Bring cord, or axe, or flame;
He only knows that not through him
Shall England come to shame.

Far Kentish hop-fields round him seem'd
Like dreams to come and go;
Bright leagues of cherry-blossom gleam'd
One sheet of living snow;
The smoke, above his father's door,
In gray soft eddies hung;
Must he, then, watch it rise no more,
Doomed by himself, so young?

Yes, honor calls! with strength like steel
He puts the vision by,
Let dusky Indians whine and kneel;
An English lad must die.
And thus, with eyes that would not shrink,
With knee to man unbent,
Unflinching on its dreadful brink,
To his red grave he went.

Vain, mightiest fleets, of iron framed;
Vain, those all-shattering guns;
Unless proud England keep untamed
The strong heart of her sons;
So let his name through Europe ring—
A man of mean estate,
Who died, as firm as Sparta's king,
Because his soul was great.

The incident on which this poem is based occurred during the English campaign in China in 1859-60. Some Sikhs, and a private of the East Kent Regiment (called the Buffs because of the colour of the facings of the uniform) fell into the hands of the Chinese. They were brought before the authorities and commanded to perform the Kotou, that is to prostrate themselves in sign of reverence and submission. The Sikhs obeyed. But Andrew Moyes, the English soldier, declaring that he would not prostrate himself before any Chinaman alive, was instantly killed.

In *Elgin's place*. Lord Elgin, formerly Governor-General of Canada, was ambassador to China at this time.

As the private was the only Englishman present, he stood for his race, and the honour of England depended upon him.

Kentish hop-fields. The English County of Kent is famous for hops and cherries.

Sparta's King. Leonidas, King of Sparta, died with three hundred of his men, to hold the pass of Thermopylae against the invading Persians.

THE UNION JACK.

Oh flag of a mighty Empire!
Oh banner of the free!
Old Union Jack, you nothing lack
To bind our hearts to thee.

Your red, the blood of heroes;
On many a hard-won field
A nation's pride, they fought and died
They died, but would not yield.

Your white, the motive pure and just,
True greatness, goodness is;
Our God will fight but for the right
The victory is His.

Your blue, the loyal hearts and true —
The hearts that know no fear,
For Britain's name and Britain's fame
They count their lives not dear.

Oh flag of the clustered crosses!
Oh banner of the free!
Old Union Jack, you nothing lack
To bind our hearts to thee.

EMMA VEAZEY.

N. B. OFFICIAL NOTICES.

A Physical Training Course will be given at the Normal School, Fredericton, beginning July 14th, 1914.

A Cadet Instructors' Course will be given at Fredericton beginning upon the same date.

Grade "B," Physical Training Certificate is necessary to qualify for admission to the Cadet Instructor's Course.

All applications for either Course should be made to the Education Office, Fredericton, N. B., not later than June 15th, next.

Ordered by the Board of Education:

That upon application, with Certificates of leave of absence from the local school boards, and of attendance at a Military Camp, during the school time lost, teachers so absent from their schools, shall be paid, not exceeding three days' government allowance.

W. S. CARTER,

Chief Superintendent Education

Education Office, April 24, 1914.

MOTTOES AND GEMS FOR EMPIRE DAY.

Fear God, Honour the King.

What's brave, what's noble, let us do it.

Not once or twice in our fair island story
The path of duty was the way to glory.

I have fought for Queen and Faith, as a valiant man
and true.

I have only done my duty, as a man is bound to do,
With a joyful spirit I, Sir Richard Grenville, die.

Love thou thy Land, with love far-brought
From out the storied Past.

Lord, Thou hast been our heritage in all generations.

Except the Lord keep the city, the watchman waketh
but in vain.

Keep ye the Law, be swift in all obedience.
Clear the land of evil, drive the load and bridge the ford
Make ye sure to each his own
That he reap where he has sown;
By the peace among our peoples let men know we
serve the Lord.

Where's the coward that would not dare to fight for
such a land?

To my true King I offered, free from stain
Courage and faith.

—much remains
To conquer still; peace hath her victories
No less renowned than war.

Great men have been among us; hands that penned
And tongues that uttered wisdom,—
They knew how genuine glory was put on;
Taught us how rightfully a nation shone
In splendour.

In our halls is hung
Armoury of the invincible knights of old;
We must be free or die, who speak the tongue
That Shakespere spake; the faith and morals hold,
Which Milton held.— In everything we are sprung
Of earth's first blood, have titles manifold.

We shall exult, if they who rule the land
Be men who hold its many blessings dear,
Wise, upright, valiant.

CANADIANS ALL.

Over the seas they come
From alien shores
Passing, an endless throng
Through Canada's doors;
Teuton, and Celt, and Slav
Latin, and Greek,
Urged by one impulse strong,
One goal they seek.

Strain of the Motherland,
Welding the throng —
Sons of the Sea-girt Isles
Stout-hearted and strong;
Some mystic charm there lies
In Canada's call;
Lo! a few fleeting years
Canadians all.

Challenge of mountains vast,
The cataracts leap,
Thunder of ocean's voice,
Deep calling deep;
The lure of vast praries:—
Insistent they call
And lo! a few fleeting years,
Canadians all!

Oh cataract, thunder
Your message again!
Ye deep-rolling rivers,
Take up the refrain!
This, this is the message,
Hark ye to the call,
"For God and for Canada,
Canadians all."

EMMA VEAZEY.

BABY SEED SONG.

Little brown brother, oh! little brown brother,
Are you awake in the dark?
Here we lie cosily, close to each other;
Hark to the song of the lark —
"Waken!" the lark says, "waken and dress you;
Put on your green coats and gay,
Blue sky will shine on you, sunshine caress you—
Waken! 'tis morning — 'tis May!"

Little brown brother, oh! little brown brother,
What kind of flower will you be?
I'll be a poppy — all white, like my mother;
Do be a poppy like me.
What! you're a sun-flower? How I shall miss
you
When you're grown golden and high!
But I shall send all the bees up to kiss you;
Little brown brother, good-bye.

— E. Nesbit.

A LESSON FROM HISTORY.

When the terrible disaster of the Titanic was fresh in every one's mind, a cartoon was published that gave much food for thought. It represented a man surrounded by piles of newspapers full of accounts of the catastrophe; from his hand was falling the paper he had just been reading; his head was sunk on his breast and his brow was bent in sad thought. Beneath were written the penetrating words "What would I have done?" We do not know whether this picture gave to the teacher whose letter we print below a suggestion for her history lessons, or not. But we think her plan an excellent one for driving home the lesson of a brave or honourable deed.

"It was during an oral history period in Grade V. the class had been telling me the story of Madeline de Vercheres. They were much interested, and admired Madeline's bravery greatly, and as a closing, I said, "Write on your paper, what you think you would have done in Madeline's place."

Many expressions were handed in, but I'm enclosing the one that I liked best."

"If I were in Madeline's place I would be so excited I think I would start in hollering 'Help, help,' and start to run to Quebec without a gun, unless I had one with me, and most likely if I did I would not know enough to fire at the Indians, but drop it and run with all my might."

This pupil realized his or her own inferiority to the heroine of the story. It is well that we should be moved by the contemplation of noble acts, not merely to admiration, but also to consideration of our own capacity, or lack of it, for heroism, and that we should realize that courage, honour and unselfishness are not lightly come by.

I've wandered too long not to know there is truth in it
still,

That lure of the turn of the road, of the crest of the hill.
So I breast me the rise with full hope, well assured I
shall see

Some new prospect of joy, some brave venture a-tiptoe
for me.

—C. G. D. ROBERTS.

England expects every man to do his duty.

When I forget my Sovereign, may my God forget me.

Patriotism: The passion which inspires to love of one's country.

ADDITION---"THE CIVIL SERVICE METHOD"

The method of addition used in the following example is apparent upon simple inspection, and therefore no further explanation is given. It is a method used in several departments of the government, hence the probable origin of its name. This mode of procedure will be found especially useful with large numbers and long additions. Teachers will find it useful in testing their own work.

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— *The Teacher.*

That inward voice which never yet
Spake falsely, when it urged the spirit on
To noble deeds for country and mankind.

He only knows that not through him.
Shall England come to shame.

Here and here did England help me,
How can I help England.

REVIEW'S QUESTION BOX.

S. B. M.— Please answer the following questions:

1. Does the sap of a tree come entirely from the root?
2. Are the Primroses and Hepaticas native to New Brunswick?
3. Has the Mitchella, (Partridge-berry,) been found in northern New Brunswick?
4. Kindly explain the Dominion Franchise Act of 1885, (page 283 of Canadian History.) What is meant by its repeal by one which restores the provincial franchise in federal elections?

1. The answer depends upon what you mean by the sap. The carbon which enters into the composition of wood, starch and other

plant products is taken from the atmosphere by the leaves and carried in the sap to all the growing parts of the tree. Materials which are held in solid form through the winter change into sugar in the spring and are carried in solution to the swelling buds by the first flow of the sap. If the sap means the water which is the vehicle of this circulation, the answer is, Yes; it all comes from the root, together with the nitrogen and much else that the tree takes up from the soil.

2. The English Primrose may very rarely be found persisting for a short time as an escape from cultivation. There are no true Primroses among the native plants of New Brunswick, except the Bird's-eye Primrose, or the Mistassini Primrose, or both. The former has been reported from Restigouche; the latter from several places along the St. John and its tributaries. Both are more frequent north of the St. Lawrence. The two species are much alike and the form or forms in New Brunswick seem to be intermediate between them. Hepatica is scarce and local in the southwestern parts of the Province, and is found as far north as Keswick Ridge. In the southeastern countries and in Nova Scotia it is very rare. It is common in New England and quite abundant in Ontario.

3. Mitchella has been found in Kent County and probably occurs in dry woods farther north. Its range in Canada is from Nova Scotia to the Georgian Bay.

4. The Dominion Franchise Act established certain qualifications for voters in the election of members of the Dominion parliament. Each province has the right to make its own franchise laws; that is, to decide who is entitled to enrolment on the list of voters for the provincial elections. The later act mentioned repealed the act of 1885 and simply adopted these provincial lists for the Dominion elections in each province.

Mrs. A., Kent Co.— Have intransitive verbs voice?

Intransitive verbs have the form of the active voice. Only transitive verbs can be passive. Some writers restrict the term active voice to transitive verbs, making voice merely a distinction between the two forms of the transitive verb.

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A SUBSCRIBER asks us to solve, or give the method for solving, five problems in arithmetic. As to do this would take up more space than we can afford, we can only refer the writer to Hamblin Smith's Arithmetic, pages 134, 266, 262 and 247.

In the last example given, the length req = hypotenuse of a right triangle whose other two sides = the diagonal of the room and the height of the room, respectively.

Diagonal of room = sq. root of $(32^2) + (24)^2$.
See Hamblin Smith, p. 247, Section 218.

It is not enough that we should enjoy advantages ourselves; a man's full duty to his neighbour demands that he should communicate them to others.

CURRENT EVENTS.

A railway tie of asbestos fibres and cement is a new German invention. It has great strength, and will hold nails and bolts better than wood.

Argental is a new alloy of silver and aluminum. It is much lighter than silver and not so easily affected by exposure to the air.

On shallow waterways in British Guiana where flat bottomed boats carrying sugar cane have been drawn by mules, a tug boat of light draught driven by an air propeller like that of an airship is to furnish the motive power.

Wolves have again made their appearance in Maine as well as in northern New York and Ohio.

Three Russian expeditions are now lost in the Arctic Ocean, or somewhere along its shores, and the Russian Government is fitting out two relief expeditions to search for them. One of the missing expeditions is supposed to have sailed last August from Nova Zembla for Franz Josef Land; the two others have been missing since the autumn of 1912, one of them having set out to attempt the Northeast Passage, and the other was last heard from between Spitzbergen and Nova Zembla.

Amundsen's North Polar expedition, which was to have sailed from San Francisco this year, has been postponed for want of time to make the necessary preparations. The leader has also found unexpected difficulty in raising the requisite amount of money.

The boundary between Persia and the Turkish Empire has never been definitely fixed; but an understanding was reached last November, and a commission consisting of British, Russian, Turkish and Persian delegates is now about to begin a survey of the boundary line.

Italy refuses to restore to Turkey the Aegean Islands taken in the late war, unless she obtains in exchange for them certain privileges in Asia Minor.

The Epirotes, inhabitants of Epirus, who are of the Greek race, and are averse to having their country included in Albania, have rebelled and organized a provisional government. Prince William of Albania, as we must call him, for he has not yet taken the title of King, has no army to suppress this rebellion; but may be able to satisfy the Epirotes by giving them self government under a nominal subjection to this rule. It was decreed by the Powers that Epirus should belong to Albania, without consulting the wishes of the inhabitants, who would have preferred to be annexed to Greece.

The arbitrary rule of Yuan, in abolishing the provincial assemblies in China as well as the national assembly, has brought about another serious revolt, in which six of the eighteen provinces are said to be concerned.

In Central America there is another movement in favour of a political union of the five republics. The unionists are strongest in Salvador, but are also organizing in Honduras, and possibly in Guatemala. Their plans are said to involve a resort to arms.

The Ulster rebellion, if it was never intended to be a real rebellion, as some suppose, came very near being real on the twenty-fifth of last month, when a large quantity of war material was landed on the Irish coast at Larne, about thirty miles from Belfast, for use in the proposed insurrection. The rifles and ammunition were brought from Germany. The serious features of the case are that they were not smuggled in, as, no doubt, earlier shipments have been; but were openly landed in defiance of the authorities, and telegraph and telephone wires were cut, while thousands of armed men held up the coastguards and police to keep them from interfering. A fleet of ten

warships has been sent to the place, to prevent a repetition of the offence. There is no doubt that the leaders of both political parties would welcome some peaceful solution of the Ulster difficulties; but it may be now too late to avoid an uprising, the bitter consequences of which would not be confined to the rebels themselves and those engaged in suppressing the rebellion.

War between the United States and Mexico began on the twenty-first of April, when President Wilson ordered the seizure of the custom house at Vera Cruz, to prevent a German steamer from discharging a cargo of arms and munitions of war for the Mexican Government. True, President Wilson protests that it is not war; and that he has the utmost friendship for the Mexican people, and only wishes to make war upon General Huerta, whom he does not acknowledge as President of Mexico. Nevertheless, the whole city of Vera Cruz has been occupied, and four regiments of troops landed there as an army of occupation; and late despatches say that Salina Cruz, on the Pacific coast, has also been occupied, and the port of Manzanillo bombarded.

Brazil, Argentina and Chile have offered mediation, and the offer has been accepted by both President Wilson and President Huerta. The offer was then extended to include General Carranza, head of the Constitutionalists, and he also has accepted the proposal. It is therefore quite possible that there may yet be a peaceful settlement.

Huerta, (pronounced oo-err-tah) who was at the head of the Mexican army, deposed and imprisoned President Madero in February of last year, and is accused of being responsible for his murder which immediately followed. He is an educated man and a trained soldier. Assuming charge of the government of the country as provisional president, he has been recognized as such by the Mexican congress, as well as by Great Britain and most of the other nations of the world, the United States of America and some of the South American republics excepted. Carranza, (pronounced car-ran-thah) with a very strong sounding of the double r) the leader of the northern rebels, or Constitutionalists, claims that he is the representative of the majority of the Mexican people; but he has not been so recognized except by his own followers. He is inclined to make common cause with Huerta against the invaders. Zapata, (tha-pa-tah) leader of the southern rebels, falsely reported to have been killed in battle, has eagerly accepted the amnesty offered by Huerta, and will join him against the United States. Villa, (vill-yah) on the other hand, welcomes the intervention of the United States, and is ready to join forces with them against Huerta, unless he is overruled in this by his chief, Carranza.

Dr. Grenfell is bent upon developing Labrador, which he calls the Norway of the American continent. He intends to start reindeer farms throughout the country and make arrangements for exporting reindeer meat. He is also interested in the preservation of the fur bearing animals of the region.

With the completion of the Newcastle station this month, the Poulsen system of wireless telegraph will be in operation between Great Britain and Canada, and the all-British telegraphic route throughout the Empire will be complete.

Archbishop Begin, of Quebec, is to be raised to the dignity of a cardinal. He will be the second Archbishop of Quebec to receive that honour.

In Russia, the Czar and the Duma are united in advocating a restriction of the liquor traffic. A local option law has been passed which may result in prohibition over a large part of the Empire. Any commune, village or township may prohibit all liquor selling within its limits by a majority vote. Women are to have a vote on this question.

After the first of July, the use of wines and spirits will be prohibited in the United States navy.

The arbitration treaty between Great Britain and the United States has been renewed for a period of five years.

SCHOOL AND COLLEGE.

Thursday, May 14, has been named as *Encaenia Day*, for the University of New Brunswick. President A. S. Mackenzie of Dalhousie University will be the Alumni orator, and Professor R. B. Miller will deliver the address in praise of the founders.

The Senior Class have selected Mr. R. L. Simms to be valedictorian, and Miss Beatrice Jewett to be Ivy orator.

The technical schools in Nova Scotia are finishing their winter courses; great satisfaction has been expressed over the interest in the year's work. Amherst had an attendance of 170 students, and New Glasgow, of 250. In Sydney, also, there was an increase in numbers over the attendance in 1913. Professor Sexton was present at the closing of several of these schools and complimented the people of the different towns upon the public spirit they showed by donating prizes to encourage attendance and hard work at the technical classes.

On Friday evening, April 17, Dr. W. A. MacDonald, Professor of Literature and History in the U. N. B., gave an interesting lecture on the life and work of Edward Gibbon, before the St. John Teachers' Association.

Miss Josephine M. Latchy, of Moncton, who won a \$400 scholarship from Yale University for two successive years, has now secured a scholarship from the University of Chicago, and will spend her next year of study at that institution.

Teachers and students who are going to Europe this summer may be interested to know there has been published a list of forty-three holiday courses in modern languages. Eight of these courses are in German speaking countries; three in French Switzerland; four in Spain; one in Italy; five in Great Britain; and the rest in France. The list, giving full particulars of the different courses, and of expenses, addresses, etc., may be had from Wyman & Sons, Ltd., Teller Lane, London, E. C., postpaid, for 2½ d.

The Local Lectures Summer Meeting will be held this year at the University of Cambridge from July 31, to August 24. A full programme, giving all necessary information, can be obtained by sending 7d. to Rev. Dr. Cranage, Syndicate Buildings, Cambridge, England.

A wonderful story of pluck and determination is revealed by the announcement that Armand Mackenzie is one of the new Masters of Arts at Cambridge. Mr. Mackenzie is

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deaf and dumb, and is the first individual so afflicted to take the degree of M.A. at an English University. He paid the fees out of his own earnings.—*Toronto Mail and Empire*.

The REVIEW has received copies of the Programmes of the British Columbia Provincial Teachers' Institute, of which a former New Brunswick man is President; and of a Convention of the Central Section of the California Teachers' Association. These programmes are so interesting and suggestive that we hope to comment on them in our June issue.

The Nova Scotia Agricultural College at Truro closed on Thursday, April 16th. Out of a senior class of forty-four, thirty-eight students were successful in the final examinations.

Eight ladies from St. John, N. B., were delegates to the Kindergarten Convention held in Springfield, Mass., April 21st-24th.

The Biennial Meeting of the Teachers of Inspectoral Division, No. 4, Nova Scotia, was held at Weymouth, on Wednesday and Thursday, April 8th and 9th. Inspector L. S. Morse presided, and Principal N. W. Hogg, of Digby, held the office of Secretary. Lessons were given on the following subjects:—Paper Folding, Nature Study, Primary Reading, Drawing, Arithmetic, History. A paper on Discipline was read by Principal Doucet. Major Outhit, the Organizer and Inspector of Cadet Corps, gave an interesting and instructive talk on Physical Education. All the lessons and papers gave practical illustrations of

the best methods of teaching. One hundred and fifteen teachers enrolled and enjoyed this most successful meeting of the Institute.

BOOK REVIEWS

Introduction to Botany by Bergen and Caldwell is recommended to all our teachers of Botany. It is a good elementary presentation of those features of plant life which are of educational and economic interest to all people. It is a recent book in both date, and treatment of the subject. Along with a clear presentation of Botany it gives a good deal of other knowledge which must remain as a valuable acquisition throughout a student's after life — correlated knowledge of forests, fields, rivers, streams, farms, orchards and gardens. Plant industries and weeds are also discussed. Most of the chapters are followed by a set of well arranged exercises or problems, which should prove valuable to the busy teacher. Lists of "collateral reading" material are also furnished. The work is well indexed, and is provided with a good glossary. The illustrations are numerous, clear, and well selected, and the full page pictures of Chas. Darwin, Asa Gray and Louis Pasteur, etc., add attraction. [368 pages, price \$1.15. Ginn & Co., 29 Beacon St., Boston.]—H. G. P.

The Bird Note Book No. 2, by Mrs. Anna Botsford Comstock, Assistant Professor of Nature Study, Cornell University is now ready, and will be found most interesting

and helpful to all teachers and students of bird life. It is uniform in size and plan with Note Book, No. 1, a notice of which appeared in the EDUCATIONAL REVIEW for March. These two make up the series, and together give outline drawings of fifty-nine birds, on paper suitable for water colors, by the noted American bird artist, Louis Agassiz Fuertes. With three or four exceptions, all the birds pictured are found in the Maritime Provinces.

These note books are planned to combine school work with field observation. For each subject studied there is a set of seventeen questions with spaces for answers. The first twelve deal with a descriptive study of the bird,—comparative size, habits, and color marking. The last five call for more extended studies, and the student is recommended to answer them from observation if possible; "if not, the answers may be found by consulting bird books."

The following are the last five questions,—the importance of this kind of bird study is obvious:

"13. What is the food of the bird and how obtained?

14. Where does the bird spend the winter?

15. Describe the nest, where placed, how far from the ground, how supported, of what material is the inside made, how lined? The color and number of eggs.

16. How are the young fed and cared for? The colors of plumage of the young birds?

17. Is the bird beneficial to us, and if so, how and why?"

These note books should be in all our schools. The Comstock Publishing Co., Ithaca, N. Y. Price 30c. per part, with liberal discount to schools using for class work.

High School teachers will welcome the new edition of Scott's *Lay of the Last Minstrel*, lately published by the University Tutorial Press. The little book contains an introduction giving a sketch of Scott's life, and short papers on the minstrel and his ballad. The origin and sources of the "Lay," its reception and critics, the border and its history. A good clear map of the Scott country is a great addition. The notes are interesting and suggestive and are preceded by a summary of the story. [London W. B. Clive. 120 pages. 1s. 6d.]

Among the many attractive geography readers the *Junior Regional Geographies* of Miss J. B. Reynolds take a leading place. The volume on *Asia* has just been issued. It has sixty-two illustrations, maps and diagrams. The text is mainly a description of the natural regions of which Asia is made up, and the influence of the structure and climate of these regions upon the life of the inhabitants is well illustrated. After each chapter there is a page or two of problems, questions and suggestions. [A. & C. Black. 182 pages. 1s. 4d.]

The books on the study of English published by D. C. Heath & Co., are generally to be recommended, and *Business English*, a little volume written by Rose Buhlig of The Lake High School, Chicago, is no exception to this rule. The author's object is to teach the art of using words in such a way as to make people think and act, and to do this, she has applied the principles of literary composition to the problems of business life. Part I deals with the study of words, and gives a great deal of practice in pronunciation, spelling, and the correct use of the different

parts of speech. Part II is devoted to simple composition, oral and written. The space given to punctuation seems to us much too large in proportion to the rest of the section. Part III has an admirable chapter on business letters, with many examples, and much material for practice. The book is full of valuable suggestions and exercises and we heartily recommend it to teachers of composition. [D. C. Heath & Co. 380 pages.]

The National Geographic Magazine, March, 1914, contains a good article, with thirty-six illustrations in "Encouraging Birds Around the Home." Price of Magazine 25c.; per copy. National Geographic Society, Hubbard Memorial Hall, Washington, D. C.

Joseph H. Dodson, 1214 Association Building, Chicago, Ill., will send a "Free Illustrated Book About Birds" upon application. His book is largely descriptive of bird houses that he has for sale, but contains some valuable information besides. Send for it.

Teachers should read Chapters XVIII and XIX of Hodges "Nature Study and Life"—Ginn and Company, Boston. These Chapters give many valuable hints for the study of birds.

WITH THE MAGAZINES.

The *Canadian Magazine* steadily grows in interest and is becoming almost indispensable to the Canadian teacher. The May number has articles on the Senate of Canada, and the Beginnings of British Commerce at Montreal; a well-written critical study of the poetry and prose of Duncan Campbell Scott, and a biographical sketch of John Galt "founder of cities. The fiction is not up to the level of the solid articles and the illustrations, but their are some readable short stories, besides other interesting short contributions.

The May *Century* has a varied programme.

A very strong article on President Wilson's first year, contributed by Maurice Low, will interest many. "He is the most masterful figure American politics has known, as determined as Jackson, but with the persuasion and tact that were foreign to Jackson's nature."

In a comparison between Shakspeare and Balzac, Mr. George Moore airily runs a tilt with all the great Shakspeare scholars on the subject of the dramatist's women. According to the author of *Esther Waters*, Shakspeare, in creating his women, let himself be limited by the powers of boy actors, and drew no portraits, "only a few delicious feminine silhouettes." The critic who ignores Shakspeare's Cleopatra, and says of Portia, that "she interests us only when disguised as a barrister" is either writing insincerely for effect, or has yet much to learn. "The Rise of Meniac Tarbell" is a delightful little burlesque of modern crazes in art. In "the Winged Armageddon" we have a most interesting account of the war against the gypsy and the brown-tailed moths.

Littell's *Living Age* always offers timely information and opinions. To name only three of the principal articles in the April numbers, "The Overtaxed Melting Pot" deals with restriction of immigration in the United States; the

New Brunswick Summer Rural Science School

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July 8th—August 5th inclusive

The Summer Rural Science School is open to teachers engaged in the Public Schools of the Province. Accommodation for only ninety is provided for. Applications should be made before June 1st.

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4. Farm Mechanics. 5. Rural Domestic Science.

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R. P. STEEVES, *Director Elementary Agricultural Education*

Sussex, N. B., April 1914

NOVA SCOTIA SCHOOL CALENDAR. 1914.

- | | | |
|------|-----|--|
| May | 8. | Arbor Day. |
| May | 22. | Empire Day. |
| May | 24. | Victoria Day. Applications for Provincial Exams. due. |
| June | 1. | Applications, Cadet Instructor and Musketry, due. |
| June | 3. | King's Birthday (holiday.) |
| June | 22. | Normal College Closes. |
| June | 24. | All Provincial Examinations begin. |
| June | 25. | County Academy entrance examinations begin. |
| June | 29. | Regular Annual meeting of School sections. |
| June | 30. | Last teaching day of school year. |
| July | 1. | Dominion Day. Applications for Rural Science course due. |
| July | 7. | Rural Science Training School course begins. |

Interprovincial Teachers' Institute

N. S., N. B., and P. E. I,

To Meet in the Technical College, Halifax

Aug. 26, 27 and 28th, 1914

N. B. Teachers are requested to note, that there will be no Provincial Institute held this year, but that all are urged to attend the Interprovincial Meeting at Halifax. There are many matters of importance and mutual interest to discuss.

For all Teachers who attend the Halifax Meeting the public schools will reopen after the summer vacation Aug. 31. For all other teachers, schools will reopen Aug. 26.

A full programme with necessary information will be published.

Make your plans early to attend.

GEO. A. INCH,

Sec'y N. B. Prov. Teachers' Inst.

"Tyranny of Labour" offers an explanation why "no English need apply" at American and Canadian factories and workshops; and "Vocationalism" treats of the improvement necessary to prepare the pupils in elementary schools for vocational training.

The March number of "The Round Table," a quarterly review of the politics of the British Empire, in a timely discussion of "The Irish Crisis," concludes that the only permanent solution of the Home Rule problem lies in a federation of the United Kingdom, in which England, Scotland and Wales, as well as Ireland, shall each have a local parliament of its own. In this way both Canada and South Africa have overcome the difficulties arising from differences of race and formed stable constitutions based upon national consent; and this, it is argued, is the only way that offers hope of final success. An article on "The South African Strike" shows the extreme gravity of the crisis in that country in January last, which the government met by the proclamation of martial law,

followed by an illegal or extra-legal deportation of nine of the leaders of the strike, or of the revolution, as it may more fittingly be called. The article closes by showing the need of some general readjustment of the powers and responsibilities of the Dominion Governments in their relation to the Imperial Government and to each other—the need of an organic union of the British Empire. A very convincing article on "The New Autocracy in China" seems to show that the republic has ceased to exist, and has given place to a military dictatorship which will be permanent; and argues that such a form of government is the only one by which the unity of China can be maintained. Articles on "The Education of the Working-Class," "The Kikuyu Controversy," and local matters of pressing moment in Canada, Australia, South Africa and New Zealand, make up a most interesting number. The June number will contain an article on "Naval Policy and the Pacific Question." [Macmillan & Co., Ltd., London; price, 2s. 6d.]

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Principal.



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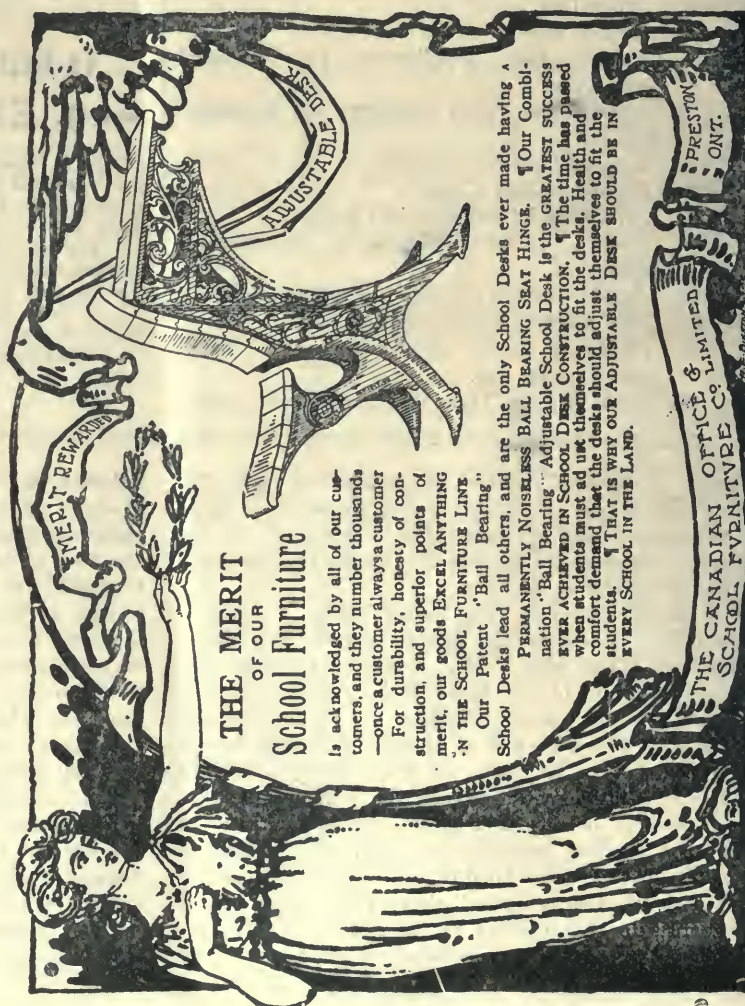
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Volume XXVIII.

ST. JOHN, N. B., CANADA, 1915.

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THE EDUCATIONAL REVIEW,

St. John, N. B.

The REVIEW will not be published in July.

All teachers will be interested in the announcement on page 27 of the Interprovincial Institute which meets at Halifax in August.

The attention of New Brunswick teachers is directed to the important official notices in this issue.

June comes and brings the end of the school year, and with it, to many of us, along with the brightness of the summer, and the anticipation of rest, comes a deep sense of discouragement. We look back to last August, and realize how imperfectly our plans have worked out, how many of our hopes for the children are disappointed, in how many ways we have failed. This feeling of depression is partly, of course, the result of weariness. When we are physically and mentally tired we cannot see things in proportion. But it is also, perhaps, a proof that we have set our aims high, and that our standards have advanced during the year. Let us look farther back still, and see if we do not expect more of ourselves than we did two, three, five years ago. Should we be satisfied now with what contented us then?

Let us be sure that the sense of failure is safer than a self-complacent sense of success. For the self-satisfied there is no advance. But those who recognize their mistakes are half way toward correcting them, and to know our own ignorance or foolishness is a step towards wisdom. "There are those," says a famous preacher, "who want to get away from their past. But you must learn, you must let God teach you, that the only way to get away from your past is to get a future out of it." This year's mistakes and failures are part of the experience that fits us for next year's work. Let them give us hope and courage.

Not long ago we drew the attention of teachers to the complaints made by business men of lack of responsibility among boys and girls going into business. It is pleasant to hear another story. The manager of a large banking business, speaking to the writer about the bank stenographer, said, "She is a most satisfactory girl to work with. Whenever I have to make an extra call upon her, in any rush or emergency, Miss N. is always cheerful, interested and ready to do her part. We can always rely upon her

to play the game." It is this spirit of "playing the game" that we want to encourage in our young people. And is it as strong among teachers as it might be? We have often been struck by the whole hearted interest and unselfishness of our teachers. But surely the lack of such a spirit in some must go far to account for the persistent note in the reports of New Brunswick Inspectors, regret at the constant changing about of teachers in the country schools. "The too frequent changing of teachers still continues to be a serious drawback to efficient work." "The seemingly never-ending changes must retard seriously the work of the schools affected." Stop and think, then, country teacher, before you make your next change. Are you thinking of yourself as part of a whole, as one of a band of faithful men and women doing some of the most important hard work of the world? Or are you playing for your own hand only? No doubt the conditions under which you work are sometimes hampering and disagreeable. Salaries may be low, trustees unprogressive and unsympathetic, pupils unruly, the life lonely. But these are, for you, the rules of the game. It would be easier and pleasanter under other conditions. But would the winning of it be as great a triumph?

The Report of the Carnegie Foundation for the Advancement of Teaching has been received, and is most interesting reading. It is well known that the primary object of this foundation is to provide pensions for teachers who have done their work upon salaries too small to make provision for old age possible. In the year ending in September, 1913, over \$600,000 were distributed in retiring allowances and pensions, the average annual payment to one individual being \$1,703.

The most important event of the year in the history of the foundation is the establishment of a distinct department to be known as the Division of Educational Enquiry. This has been made possible by an extra grant for the purpose of \$1,250,000, made by Mr. Carnegie in January, 1913. Among other educational studies, this department is now making an elaborate enquiry into legal education in Canada and the United States.

The report includes among other matter,

studies of pension systems, and discussion of current educational problems. It commends the present tendency of college entrance requirements towards elevation and flexibility, but shows the need for further improvement. A very frank criticism of college catalogues is pertinent and timely.

NEW BRUNSWICK SCHOOL REPORT.

The report of Dr. Carter, Chief Superintendent of New Brunswick schools, shows that during the year ending June 30th, 1913, there were very nearly 70,000 different pupils attending school. The percentage of attendance for the term ending December 31, 1912, was 71.09. The number of teachers at work during the same term was 2,020, 194 of whom were men and 1,826 women, or in the proportion of 1 to 9. The number of pupils in High Schools was 1,975, an increase of 110 over the figures of 1912.

Salaries are being slowly forced upward, but are not yet high enough to command efficient teachers in all parts of the province. The demand for teachers has exceeded the supply. Dr. Carter gives as reasons for this:—The increasing number of young men studying agriculture; the many more business posts open to women; and the migration from the province of many of our best teachers. Two causes tending to keep down salaries are the employment of third class teachers in the richer districts, and teachers engaging in their home districts at a lower salary than an outsider could accept. The Superintendent says "when the salary question is righted there will be no question of a sufficient supply of teachers."

Among matters of congratulation Dr. Carter mentions the increased attendance and interest at the County Institutes, and especially commends the practice of having a special section for the meeting of trustees and ratepayers.

The report on the whole is encouraging, showing as it does, increase in schools in operation, teachers, and percentage of attendance. The introduction of agricultural education, made possible by the grants from the Dominion Government, marks a distinct advance, and further progress in the line of vocational instruction is looked for. The report of the Director of Manual Training is interesting reading. Mr. Peacock urges the adoption of a definite plan

of Elementary Handwork in the primary schools, and the establishment of technical classes in the centres. The Inspectors' reports are in most cases full and definite and offer many suggestions for thought. There is very general approval of the increasing attention given to nature study and school gardening and the consequent interest in rural life given to the children. Nearly all deplore the constant changing about of teachers in the country schools.

Included in the volume are the reports of the school for the Blind, and the schools for the Deaf, and the report of the Chancellor of the University of New Brunswick.

NOVA SCOTIA SCHOOLS.

Superintendent A. H. MacKay in his annual report says that the year's work has been the most progressive in the educational history of the Province. The total enrolment of pupils in the schools has increased by over 1,200 since last year. The quarterly percentage of attendance has risen to 71.7 per cent in all the schools, and in the County Academies to 83.7 per cent. The number of schools in session show an increase of thirty in one year. There were only 85 vacant schools, nearly one-half of which have now no school population, or are served by schools of adjoining sections. There has been an increase in the number of teachers, especially of the higher class, and, we are glad to note, a general increase in the salary of every class of teacher, both men and women.

The Superintendent quotes as evidence of an improvement in educational conditions, that the number of men teachers of all the higher classes has begun to increase. A generous response has been made to the appeal for higher salaries, but further efforts in this direction are needed. It is strongly recommended that the Municipal Fund (which has not been increased in proportion to the increases made in the Sectional and Provincial contributions) should be raised from 35 cents to 50 cents per unit of population. This increase has already been made in Cumberland and Victoria Counties, and it is hoped will become general.

WOODLAND FERNS.

J. VROOM.

Including the Flowering Ferns and the Moonworts, which are generally called ferns, about forty different species of ferns have been reported as growing in the Atlantic Provinces of Canada. If we count out the three species of the Flowering Fern or *Osmunda* group, the Royal Fern, the Cinnamon Fern and the Interrupted Fern, not now recognized as true ferns, and also the five Moonworts, which are in a class by themselves, we have a little more than thirty left to make up the list. Some of these are extremely rare; some, perhaps, of doubtful occurrence. Possibly not more than fifteen or twenty species can be found within the borders of any one county in the three provinces. Dry hillsides, moist cliffs, rich woods, and wet meadows, each have their own group of attractive ferns. We will confine our attention for the present to those which we might expect to find in a day's tramp through the woods.

To know a fern when we see it, and be able to distinguish between ferns and flowering plants, is not a very useful accomplishment; to be able to see the beauty of a fern is an acquisition of much greater value. The bright colours of our field and garden flowers appeal to young children, and the quieter colours and markings of woodland blossoms to the older ones, without much training; but the beauty of ferns is chiefly in their lines of growth, a beauty discernible only to the trained eye, for the appreciation and love of the beauty of pure form is almost wholly a matter of training.

The delicate texture, the variety of forms, the graceful sweep and firm outline of the fronds in some species, in some the inimitable disposition of the fruit dots, like a rich embroidery of needlework, together with the knowledge that they are so different from other plants as to seem almost like the products of another world, account for our love of ferns. Only mosses can equal them in beauty of form; and only the mosses seem so much to belong to the localities in which they are found. Ferns and mosses alike are an inseparable part of the beauty of the spot. Their charm can be destroyed by the devastating hand of the collector, but cannot be carried away.

To pull up and carry off a wild plant that

H. R. H. the Duke of Connaught will visit different points in Newfoundland during the second week in July.

does not belong to one by any other right than the right of seizure, or even thus to rifle the woods and fields with the full consent of the lawful owner, is a distinct injury, not trifling in its extent when we come to consider the total of such depredations all over the country. Yet those who love our native ferns because they are native, and wish to make a collection of their fronds for that reason, need not hesitate to do so, provided they do not uproot the plants. To gather fronds that are matured and would soon perish naturally is no more robbery than to gather the fruit of a tree.

The classification of ferns is governed chiefly by the shape, position and covering of the fruit dots on the back of the fronds. In all true ferns the young fronds are coiled, and gradually unroll as they grow. By this feature we may distinguish ferns from most other plants with a fern-like leaf. If the young leaf is not coiled at the tip, most certainly the plant is not a fern.

In searching for any particular fern, we should know the time of its fruiting; but most ferns in our region mature their fruit in July and August, the time when most of us have our summer vacation. So the time of our trip is midsummer, and the place is wherever we may happen to be.

By the roadside, as we approach the woods, we shall probably find the Lady Fern. Its fronds are bipinnate; that is, each of the primary divisions is again divided. They are from one to three feet long, and rather delicate when young. The fruit dots are curved, sometimes horseshoe-shaped; and at maturity are so crowded as to give a dark brown colour to the lower side of the frond.

If we have to cross a dry pasture, we may see the Common Brake, the large coarse fern so abundant in dry places. Its fronds rise singly from a root stock many feet in length, and its fruit is in a continuous line under the recurved margin of the frond.

Here, too, may we find the Mountain Fern, also called the Hayscented or Sweet-Grass Fern. It grows in thick clusters. Its fronds are bipinnate, slender, tapering, yellowish green and somewhat hairy; and when stirred by a light breeze give out a very pleasant odor. The fruit dots are small, each on a recurved tooth

on the margin of the frond. There is no fern in the whole list that would be so much missed from the landscape if it should disappear, for its dense patches give a pleasing touch of colour to the hills.

Where the woods are dry and rocky, we may look for the Marginal Shield Fern, otherwise known as the Evergreen Wood Fern. It is easily determined. The thick fronds are from six to thirty inches long, and bipinnate. The large round fruit dots are borne close to the margin of the frond. The stout rootstock is chaffy with dark brown scales. If we find a perfect specimen with a mossy rock for a background, we shall be glad that we have brought a camera.

We shall find use for the camera again when we come upon a boulder capped with a mat of Polypody, or Rock Fern. Though not very plentiful with us, it may be found throughout our district. Its fronds are from three to ten inches long, evergreen, simple, and rather variable in shape; and its large, round, naked fruit dots are in rows on the back of the frond, about midway between the midrib and the margin. While it likes a dry situation, it is usually found in places that are more or less shaded.

Deeper in the wood, where there is more moisture in the air, we may find another evergreen species, the Christmas Fern. This is, perhaps, quite too well known; for it is becoming scarce in places because thoughtless persons tear it up and carry it home with them for a parlor ornament. It is very attractive late in the season, its bright green showing in marked contrast with the drifting autumn leaves. Its fertile fronds have contracted tips, bearing thickly set fruit dots which soon cover the whole lower surface.

If we are very fortunate, we may find the Male Fern, a rare and stately fern which has been found at several points in Cape Breton and in central New Brunswick. It resembles the Marginal Shield Fern, but is larger and more erect, and its fruit dots are not marginal.

Still more rare is Goldie's Fern, which has also been found in New Brunswick. It is the largest of our wood ferns; and is not easily distinguished from the Male Fern, except by the broader fronds, which are usually ten or twelve inches in width. The fruit dots are very near

the midrib. The tallest fronds are about four feet in height.

Braun's Shield Fern may possibly be found. It is a strikingly beautiful fern, about two feet high, known at a few widely distant stations in New Brunswick and Nova Scotia, where it reaches its southern limit at sea level. Its glossy fronds, beset with soft hairs, are chaffy on the under side, and taper downward from the middle to a very short stalk. They rise in a close crown, edge to edge, like the circle of plumes in an Indian's feather bonnet. The best frond we could choose as a specimen would be less satisfactory than a blank in our collection, with a photograph or a mental picture of the unbroken circle.

While we are looking for these rare ferns, we are very sure of finding another shield fern which is not rare. It is called the Spinulose Wood Fern, because the lobe of its segments are tipped with small sharp spines. In one or more of its well marked varieties, it may be found in all our wooded districts. It is tripinnate, or nearly so, in the forms most common with us; and its fronds are more or less inclined to remain green through the winter, lying flat upon the ground. It is a beautiful feathery fern, with fronds from one to two and a half feet long. The fruit dots are round and small.

In moist rocky places through the woods we shall find beds of the Beech Fern and the Oak Fern, together or apart. The fronds of the former are from six to ten inches long, triangular in outline, rather longer than broad, and twice divided, the lower pair of pinnae usually bending forward. The fruit dots of both are small and naked, and are borne near the margin. The frond of the Oak Fern is in three divisions, widely spreading; is lighter in colour than that of the Beech Fern; and has a polished dark brown stalk.

A wetter spot may lead us to look for the Silvery Spleenwort, though this fern is by no means common with us. Like all the spleenworts, it has its fruit dots elongated, and protected when young by a covering which is attached by one edge. The covering in this species is light coloured and somewhat shining, hence the name. It differs from the Lady Fern in being pinnate, not bipinnate; and in the fruit dots being less curved. The fronds are

from one to three feet long, and are narrowed towards the base, so that they closely resemble those of the New York Shield Fern. The latter, however, grows usually in lower ground; and can be distinguished from the spleenwort by its fruit.

Leaving the woods and following the stream, we might find the New York Fern and others of interest, including the Ostrich Fern, which sometimes rises to a height of seven feet; but perhaps that trip, and a visit to the waterfall, where the more delicate ferns are found, should be left for another day.

The fronds that we have gathered as specimens must be carefully dried, if they are to be worth keeping. The photographs we have made will be much easier to preserve, and easier of reference. But the collection, whether of photographs or of broken pieces of the plants, has not been the chief object of the journey. We will not class ourselves among those who go to the woods for what they can get in their hands, leaving a trail of desolation in their course. The true lover of ferns is not the one who collects them, living or dead; but the one who likes to see them in their native wilderness, and never misses an opportunity to enjoy them where they grow.

(This paper will be continued in the August number, under the title of "Cliff Brakes and Lowland Ferns".)

SINGING SCHOOL FOR THRUSHES.

Find a family of thrushes and carefully note what takes place. The old male thrush will sing the sweet song in loud, clear, flutelike notes once, and then stop to listen while the young birds try to imitate the song. Some will utter one note, some two. Some will utter a coarse note, others a sharp note. After a while they seem to forget their lesson and drop out one by one. When all are silent the old thrush tunes up again, and the young thrushes repeat their efforts and so it goes on for hours. The young birds do not acquire the full song the first year, so the lessons are repeated the following spring. I take many visitors into the woods to enjoy the thrushes' singing school, and all are convinced that the song of the wood thrush is a matter of education pure and simple.—*Forest and Stream.*

According to this advertisement in a Connecticut country paper, there is a cow in New England which is possessed of rare accomplishments:

"Wanted—A steady, respectable young man to look after a garden and care for a cow who has a good voice and is accustomed to sing in the choir."

CENTENNIAL ANNIVERSARIES OF THE WAR OF 1912.

J. VROOM.

XXIII.—*The Loss of Fort Erie — The Battle of Chippewa — The Occupation of Moose Island — The Capture of Prairie du Chien — The Burning of St. David's — The Battle of Lundy's Lane.*

July 3.—Fort Erie, at the outlet of Lake Erie, stood on the west bank of the Niagara River, nearly opposite Buffalo. At the opening of the campaign in the last year of the war, it was a weak position occupied by a garrison of about a hundred and fifty men. General Brown, who had succeeded to the command of the United States forces, had at Buffalo an army of four thousand or more, ready for another invasion. Early in the morning of the third of July, he sent one brigade across the river below the fort; while another, which he commanded in person, landed above it. A combined attack was made, and after a very brief resistance the fort surrendered. It was an easy victory for the invaders, who strengthened the fort without delay and made it the centre of their military operations. They abandoned it four months later, when the war was practically over.

July 5.—General Brown planned to move northward from Fort Erie, clearing the Canadian bank of the Niagara as he went; and finally to dislodge the British from their two strongholds at the mouth of the river—Fort George, on the Canadian side, and Fort Niagara, on the New York side. His advance brought on the battle of Chippewa.

The Chippewa or Chippaway Stream, now called Welland River, enters the Niagara about two miles above the falls. Here, on the fifth of July, General Riall, who commanded the British in the absence of General Drummond, advanced with less than two thousand men to meet the invaders. The field was stubbornly contested; but Riall's command, largely outnumbered, was defeated with heavy loss—if, indeed, it may be called a defeat when it checked the onward march of the invaders for two days, thus giving time for Riall's reinforcements to arrive, and leaving the issue to be decided three weeks later by the battle of Lundy's Lane.

July 11.—Up to this time, hostilities along

the coasts of Maine, New Brunswick and Nova Scotia had been confined to petty privateering and the occasional capture of a merchant ship with a valuable cargo. Suddenly, on the afternoon of the eleventh of July, a British fleet under the command of Sir Thomas Hardy appeared at Eastport, and occupied that place without resistance. The British, however, did not take Eastport; they took Moose Island. Eastport was a Massachusetts town in the District of Maine; Moose Island, according to the British contention, was a part of the Parish of West Isles in the Province of New Brunswick. Moose Island was in Eastport; or a part of Eastport was on Moose Island. If the inhabitants did not wish to remain there, they might move off. Many chose to move to the mainland portion of their township, now the town of Lubec; but others remained and became for a time good British subjects.

The British occupation continued until 1818, when the troops were recalled to Halifax, a boundary commission having decided in 1817 that the island rightfully belonged to Massachusetts.

July 19.—While, nominally, the occupation of Moose Island was not an aggression, but merely a reoccupation of British territory, there was at the same time an aggressive movement in the west, where the British force that had taken possession of Michilimackinac at the beginning of the war still held that post. Like the taking of Moose Island, it was a small matter compared with what was going on at Niagara; yet it should not be overlooked, as it shows the extent of the war.

And of all the marvellous doings in that strange border war, surely one of the most remarkable was the courageous weakening of the little garrison at Michilimackinac, which was in constant danger of attack, to send out an expedition for the reduction of Prairie du Chien, five hundred miles away, at the junction of the Wisconsin River with the Mississippi, where nothing was at stake but the interest of their Indian allies. To them, nevertheless, the interest of the Indians was an imperative demand; and therefore before the end of June the detachment was on its way, accompanied by five hundred Indian warriors.

That such an expedition, taking with it only

one small cannon, should have reached its destination, found there a fort mounting six guns supported by a gunboat or floating battery of fourteen guns, and should have driven off the gunboat and compelled the fort to surrender, would have been a story quite incredible were it not confirmed by the official reports. By following the route of the first French explorers, up the Fox River and down the Wisconsin, the party reached Prairie du Chien on the seventeenth of July. On the nineteenth they had accomplished their purpose and were ready to return. The incidents of their long journey must be left to the imagination; and we may try to imagine how they were received when they returned victorious, and learned that in their absence Michilimackinac had been attacked by five ships from Detroit, and had successfully resisted the attack.

Another notable event took place on the nineteenth of July. The little village of St. David's, near Queenston, was burned by order of Colonel Stone, who was in command of a party of the invaders. This was done without any special provocation, other than that the colonel considered it a nest of Tories. It must be added, to the credit of General Brown, that as soon as he heard of it he punished Colonel Stone by abruptly dismissing him from the army without trial.

July 25.—Every boy in Canada who has read his Canadian history knows of the battle of Lundy's Lane, the fiercest of all the battles of the war; the battle that was fought at night, with the roar of the Falls of Niagara mingling with the sounds of the conflict. Some may not know that United States historians have claimed a victory for their army in the battle of Bridge-water, and that this is the same battle under another name.

A monument marks the battlefield. Years ago, it is said, the caretaker of the place, wishing to please his visitors, had two stories to tell; one for Canadian visitors, and one for those who came from the United States. It happened one day that among the visitors was General Winfield Scott, of the United States army, who had led the first attack and had been wounded in the thickest of the fight. The courteous narrator mistook him for a British officer, and told the wrong story. Probably neither of his stories was quite correct.

The battle began at six o'clock on the evening of the twenty-fifth of July. General Riall, with about a thousand men, finding his position attacked, as he supposed, by an army of four thousand, began a hasty retreat. Just then General Drummond came up with eight hundred more troops, and took command. He countermanded the retreat and formed his men in order of battle. The invaders, who had not as yet their whole army on the ground, attempted to gain the hilltop which the British had suddenly left and as suddenly reoccupied. In this they failed; but they got possession of five of the British field guns, by an attack so sudden and unexpected that every man at the guns was killed.

There are contradictory accounts of what followed, but some things are undisputed. Riall was wounded and taken prisoner. Both Drummond and Brown were wounded later. About nine o'clock, both sides were reinforced; thus bringing the British strength up to three thousand, and bringing into action the enemy's full force, with the exception of Scott's brigade which had left the field after suffering severely in the first assault. The additional British troops were wearied by a march of twenty miles in the heat of the day; but their arrival made the numbers nearly equal, as in fact they had been throughout. The battle went on in darkness and confusion, with varying incidents of repulse and rally and renewed attack, but with little advantage for either side. About midnight the fighting ceased, perhaps because both armies were exhausted. The British still held the hill, from which they had not been driven; and the enemy moved off unpursued, retreating towards Fort Erie.

The British either recaptured their guns or found them next morning on the field where the enemy had left them. Whichever is true, in the end the British has lost one gun and had gained two. And, whatever else is doubtful, there is no question about the severity of the struggle. The losses were very heavy. Nor is there any question that General Drummond looked upon it as a decisive victory; for he immediately disbanded all the sedentary militia and sent them home to look after their crops.

The battle of Lundy's Lane still remains the last important battle fought in Canadian territory.

SCHOOL EXHIBITIONS.

L. A. DEWOLFE.

Possibly in no way can one awaken more interest in Nature Study than through the School Fair. Children like to collect with a purpose. And through collecting plants and insects, they become acquainted with these more intimately than in any other way.

Furthermore, the Fair brings the parents to the school. Nature Study too often is made a dry, formal subject forced upon the school by the course of study. Oftener still, it is entirely neglected. With an exhibition in view, however, the subject ceases to be a school subject, and becomes one in which the children are really interested.

Now is the time to begin preparation for next September's Fair. Even if the teachers change in the meantime, the Fair, being largely in the hands of the pupils, is kept in mind throughout the summer. Teachers who really wish to advance the interests of their pupils will start the scheme, even if they never see its completion. Possibly they will go to a school next term where some other teacher has started a similar scheme; and, in such case, the spring's experience will help fit into the new surroundings.

A school Fair should consist of an exhibit of all sorts of grain, vegetables, fruits and flowers, that the school children grew. Whether they grew them at home or in the school garden matters little. All nature collections made by the children should also be exhibited. These will consist of collections of wild flowers pressed and mounted on cardboard or white paper; collections of garden flowers, weeds, seeds, native woods, ornamental shrubs, etc., Many of these collections may illustrate such plant relations as seed-dispersal, protection, adaptation to environment and insect relations. Collections according to locality are always interesting.

Besides plant collections, children will exhibit their collections of minerals, insects, fossils, sea-shells, pictures of natural objects, nature booklets, etc.

Older children could make collections illustrating local, county or provincial industries. For this, much material might be obtained through exchange with other schools.

The girls of the school would exhibit samples

of their sewing, cooking, preserving, stencilling, raffia work, etc.

If they can grow tomatoes, onions, cucumbers and cauliflower, and from these make pickles, their exhibit would have double value.

It is needless to name all the things that might be exhibited. The chief point is the exhibition.

How many teachers, when they read this, will bring the subject before their pupils? The last month of school is usually a "drag." Try this plan to brighten things up. Ask the children to look after the garden plots they already have, and assure them it is not yet too late to plant something more. No matter how small your school is, try the Fair. Talk it over with the people. Ask for one dollar contributions towards a prize list. Appoint an exhibition committee to keep things moving during vacation. This committee will also carry the work over from one teacher to the next. The honor of having *started* the exhibition idea in any school is worth the trouble. If a teacher remains to see the end of it, so much the better.

These Fairs have been tried in many places. They have usually met with opposition from non-progressive people the first year. The second and third years, however, shew marked improvements.

After all, the life of a Fair is the teacher. If she cannot inspire her pupils to do things; if she teaches by the clock; if she thinks of school only between nine a. m., and four p. m.; if she can teach only from a text-book; if she can teach only dead subjects; to be brief, if the teacher have no ambition, energy and snap, she should leave the Fair alone. But if she be a real teacher, this is an opportunity to do something for which she will be remembered when her present pupils are the men and women of the country.

I should consider it a favor if teachers in Nova Scotia who have already tried School Fairs would write me, telling me what they did and with what success. Those who will try it this year for the first might also write me at Truro. I shall appreciate it. I want to know the difficulties you meet and also your achievements. You can help me by such reports. Possibly I, too, can help you.

The Royal Commission on Industrial Training and Technical Education.

By far the greatest event in the educational record of Canada for the year is the publication of the Commission on industrial training and technical education. This Commission was appointed in June 1910, and consisted of the following gentlemen: James W. Robertson, C.M.G., LL.D., *chairman*; Hon. John N. Armstrong, of North Sydney, N. S., George Bryce, Esq., LL.D., F.R.C.S., of Winnipeg; M. Gaspard de Serres, Montreal; Gilbert M. Murray, Esq., B.A., Toronto; David Forsyth, Esq., M.A., Berlin, Ontario; James Simpson, Esq., Toronto. The work of the commission was to enquire into the needs and present equipment of the Dominion as regards technical education, and into systems of such education in use in other countries.

This appointment by the Federal authorities was heartily approved by the Governments of the respective provinces. The matter of technical training is of such importance to the trade and commerce of the whole country, that it was recognized as a question for national, rather than sectional, investigation and study.

An interim report was submitted by the Commission in 1911, and in 1913 the full results of their labours appeared in four volumes, containing probably the best exposition of the subject in the English language. Parts one and two of the report appear in Volume I. Part one contains the opinions and recommendations of the Commission, and the other parts are devoted to detailed statements of the information upon which these opinions are based. Part III fills two volumes, and contains full accounts of the systems and methods of industrial training and technical education in England, Scotland, Ireland, Denmark, France, Germany, Switzerland, and the United States. Part IV is an exhaustive inquiry into conditions affecting industrial education in Canada, and covers the educational systems in the respective provinces, the industries, resources, conditions of industrial workers, both men and women, and the special needs as regards industrial and technical training for the proper development of the country. To learn that in Canada alone, between 1500 and 1600 persons, men and women, teachers, business men, farmers, mechanics, in short, people in almost every walk of life, gave information and sug-

gestions to the Commission, is to get some idea of the labour involved and of the general value of the report.

The information as to technical and industrial schools in other countries, and of the needs and opportunities in our own, are full of interest, and offer material for profitable study, but the part of the report that was most eagerly looked for was that embodying the recommendations.

Some of these are: that in Elementary Schools the teaching of Drawing, Manual Training, Nature Study, Experimental Science and Pre-Vocational Work, should be provided for; that Secondary Vocational Education should be provided for those persons who are to follow industrial, agricultural, commercial and housekeeping pursuits; that the plans adopted should be such as to preserve provincial control, encourage local initiative and develop local responsibility, and at the same time ensure consideration of national interests, as well as of local points of view; that for elementary education the Dominion parliament should make a grant of not less than \$350,000 a year for ten years, and that this sum be divided among the Provinces in proportion to population, in amounts not exceeding seventy-five per cent of the sum, expended the year before by each Province in elementary education; that the sum of \$3,000,000 be granted annually for ten years by the Parliament of Canada and paid into a Dominion development fund, this also to be allotted in shares to each Province for development undertakings.

If space allowed, we should gladly quote at length from the report. We commend it to the thoughtful reading of all who are interested in education, and who desire that Canada should take an honourable place among other nations. It is very far from being a mere collection of dry facts and statistics. Human interest abounds on nearly every page, and the personal element is emphasized. Indeed the final word of the report is an admission of the inadequacy of organizations and "mere payments of money" to ensure the education of the present generation, without "the personal effort and service of parents and others."

About forty-four thousand men and boys are employed as sailors on ships registered in Canada.



PLATE I.

DEVELOPMENT OF THE FROG.

Copied by permission of Messrs. Ginn & Company, Boston, from their "General Zoology."

NATURE STUDY OF ANIMALS.

H. G. PERRY.

In this picture on the development of the frog, figures 1, 2, and 3, represent frog's eggs or spawn in different stages of development. Their relative size and general structure are well illustrated, but these points are best seen in the eggs themselves, and if possible should be so studied—belated eggs are sometimes found in cool ponds as late as June.

Note the dark central part surrounded by the transparent gelatinous covering. This is spher-

ical at the beginning, but gradually elongates into an early tadpole-form, as it approaches the hatching period. It is the essential part of the egg, and is to the frog's egg what the yolk is to the hen's egg. With what is the outer part or covering comparable?

This covering, now thick and gelatinous, was at first, when the eggs were deposited in the water, a very thin coat. It absorbed water, began to swell, and reached its greatest expansion at the end of three hours. Besides holding the eggs together in a mass, and affording protection from injury by contact with surrounding objects, and from animals, it is said to perform valuable work in the process of incubation, of capturing and storing heat.

Place the bulb of a thermometer in a mass of eggs, and compare their temperature with that of the surrounding water. Which is the warmer, and why? Note how the gardener captures and holds the heat of the sun for his plants in hot beds, and hot-houses. The egg does the same work by means of its gelatinous coat, combined with the power of the dark central mass to store heat.

Correlate this work with lessons on heat and color. Compare the use of white, and black clothing in hot countries. Which color predominates, and why?

Before the eggs hatch, the little larvae are quite distinct within the gelatinous covering, (see figure 3), and they finally hatch, in from seven to ten days, according to temperature, into forms pictured in figure 4. These young are at first blind, and without gills, or a true mouth. They fasten themselves to weeds and other objects in the water by means of a crescent-shaped adhesive apparatus at the anterior end, and the body is more or less covered with cilia, which are used for locomotion.

Eyes, external (primary) gills, and a mouth for feeding, and the use of the tail in swimming soon follow,—see figure 5. The primary gills are replaced by secondary gills, which soon become covered with a fold of skin leaving only a small hole, usually in the left side, for the exhalant current of water. This is the form of the tad-pole in summer,—see figure 6.

The changes outlined take place in a few weeks and can readily be observed by keeping the eggs in a glass fruit-jar in the school, the only

care necessary being to keep them well supplied with fresh water, removing and adding a little every day.

Large tadpoles, which have not quite reached the stage represented by figure 7, may be found in ponds in the fall, and are easily kept in glass jars during the winter. Till toward late spring they require very little food besides what they

Study the form of the mature frog, and compare it with the forms through which it has passed in its early stages. These forms, together with the egg, complete the cycle of its life history.

Note the picture of the skeleton of a frog, and compare it with the skeletons of other animals. Notice the close similarity between it and the skeleton of man, especially in the bones of the arms and legs. This supplies a good exercise in working out homologous parts. The radius and ulna are separate in man, but in the frog these are almost completely grown together; the same is true of the tibia and fibula. The frog also shows a peculiarity in the tarsal bones, see 13. 16 is a rudimentary toe. The pelvic girdle is pictured in 10, and the prolongation of the vertebral column, in 3, is known as the urostyle. The bones of the head are not so readily compared with those of the human skull. The position of the eyes is well marked, and between and extending back from them is the small brain case. 4 marks the scapula. Note the small number of vertebrae in the back bone,—nine,—eight have well marked lateral processes. Note the absence of ribs.

THE ANTIOPA BUTTERFLY.

Plate III illustrates the metamorphosis of our earliest butterfly, the mourning cloak or antiopa butterfly (*Euvanessa antiopa*). It is a widely distributed insect, occurring throughout North America as far south as Mexico and Florida, and is found over northern Europe and in Asia.

The upper picture represents the larvae or caterpillars, a little less than half their natural size, feeding on a twig of elm. They are often called the spring elm caterpillars. Look for them in a few weeks on elm, and willow trees, you will see at once why they are spoken of as "spring."

The middle picture shows the pupa or resting stage, chrysalis. Note the empty chrysalis to the right, and the adult, winged form, imago, clinging to the twig. The lower picture is a dorsal view of the imago with wings expanded, slightly reduced.

They live about four weeks in the caterpillar stage, molting once each week, and feeding with increased voracity with every molt; they then pass into the pupa or resting stage, and

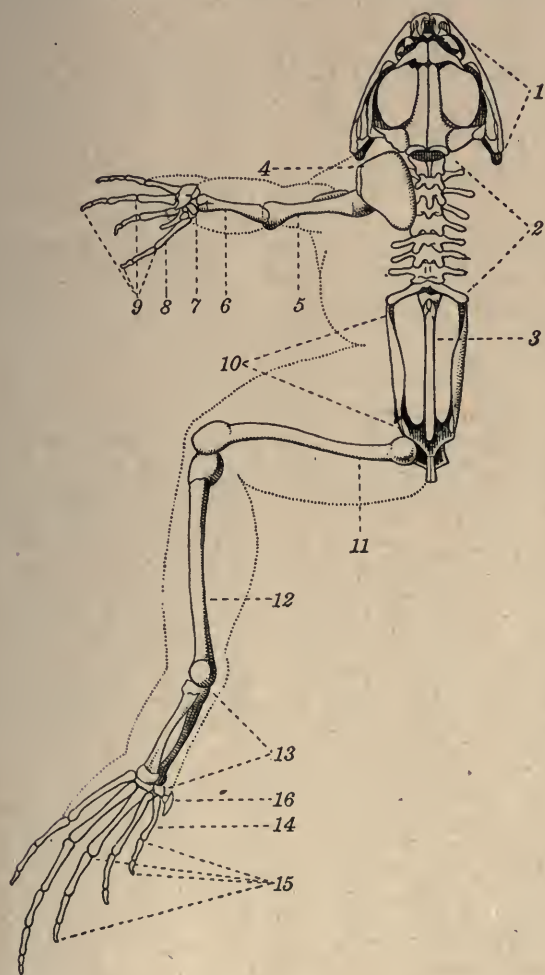


PLATE II.

SKELETON OF FROG, NATURAL SIZE.

Copied by permission of Messrs Ginn & Company, Boston, from their "General Zoology."

can nibble from a water-plant, which should always be in the jar. In spring and early summer they pass through the stages pictured in figures 7, 8, 9, 10, and 11, and finally reach the mature form seen in figure 12. Specimens representing these forms may be gathered in shallow parts and sloughs where the water is warm. If fed fish-food during the winter they develop earlier.

remain in this from twelve to fourteen days. The short resting period gives them great value for school illustration.

The adult forms of late summer and fall hibernate during the winter, and come out in

In captivity they will feed on a thick solution of sugar or the juice of a freshly cut apple.

Compare the life history of this insect with that of the grasshopper. Note that young grasshoppers hatch from the eggs in forms quite similar to the adult, and gradually reach the adult size and form through a series of molts, remaining active all the while. Such a gradual change of form as this, without a resting stage, is known as *incomplete metamorphosis*, while the changes outlined in the life history of the butterfly, with its resting pupal stage, constitute *complete metamorphosis*.

THE BUD MOTH.

Many of the opening buds of apple trees will be found more or less gnawed, and pierced by small worm holes. These are the marks of the bud moth. Look for the larvae in curled or rolled leaves near the buds.

This larva is a small cylindrical, naked worm, from one-half to three-quarters of an inch long, and of a pale dull, brownish, color, and with a black head. Note its nervous activity when the leaves are unrolled from around it. Collect several and preserve in 70% alcohol.

About the last of June these larvae are full grown, and pass into the pupal stage. Collect several pupae and preserve in alcohol. Others on the twig fasten securely small bags made of cheese cloth in order to secure the moths when they escape in July.

Caged moths will deposit eggs on apple twigs. This makes all the stages of this animal complete — eggs, larvae (the chief feeding stage) pupae (the resting stage) and the moth (the reproductive stage).

Study the economic importance of this and other insect pests, and learn how the farmer keeps them in check. At what time would you advise spraying for the bud moth?

There are many other forms that can be worked out more easily than this particular one, and afford quite as good biological training, but this insect was selected mainly because of its small size, and the fact that its extensive depredations often pass over quite unnoticed.

The following forms are recommended for additional study: Tent-Caterpillars, Canker-worm The Fall Web worm, Plant-Lice or Aphids, Scale Insects, Coddling Moth, Borers, etc., etc.



PLATE III.

THE SPRING ELM CATERPILLAR, OR MOURNING CLOAK BUTTERFLY.

[Slightly reduced]

Copied by permission of Messrs Ginn & Company, Boston, from their Elementary Entomology.

early spring, the earliest even while the snow is yet on the ground. On warm days they may be seen sipping with their long tongues the sweet sap of the maple at cut twigs and stumps. By biting the young maples for sap the red squirrel unwittingly provides many a feast for these butterflies.

NOTES ON BIRDS.

SPRING MIGRANTS.

In this report on the spring migrants only a few of the earlier, and more important species have been named. Through want of data, for the latter part of May, from some stations, the names of several species have been withheld for the time. We hope to be in a position to report on these later.

The tabulation is made by counties, those of New Brunswick coming first. The date following the name of a place indicates the time the bird was first seen; and when followed by a dash and another date, the last indicates the time of becoming common.

ROBIN.—Charlotte Co., (Big Duck Island) March 27 to April 8, (Lynnfield) March 27 to April 14; St. John Co., March 27 to April 6; Queens Co., April 7-18; Sunbury Co., April 5-7; Victoria Co., April 17; Westmorland Co., (Shediac) March 26 to April 8, (Moncton) April 4-11; Kent Co., (Richibucto) April 6-11, (McNairn) April 7; Hants Co., March 21-26; Kings Co., March 21 to April 7; Yarmouth Co., April 2-5; Shelburne Co., March 29 to April 6; Queens Co., March 21 to April 5; Guysboro Co., April 3-15; Antigonish Co., March 24 to April 7; Pictou Co., March 16.

SLATE-COLORED JUNCO.—Charlotte Co., March 26 to April 6, March 28 to April 7; Queens Co., April 8-13; Sunbury Co., April 10-14; Westmorland Co., (Shediac) April 5-12; Kent Co., April 6-15; Hants Co., April 2; Kings Co., April 5-10; Yarmouth Co., March 28; Queens Co., March 18 to April 5; Guysboro Co., April 8-14; Antigonish Co., March 24 to April 7; Pictou Co., April 9.

FOX SPARROW.—Charlotte Co., March 27; Hants Co. April 6; Kings Co., April 2-7; Queens Co., April 18 (several at Milton); Guysboro Co., April 17-22; Antigonish Co., April 13-14; Pictou Co., April 12-13.

SONG SPARROW.—Charlotte Co., March 26 to April 6; Queens Co., April 12-18; Sunbury Co., April 13; Carleton Co., April 23 to May 10; Westmorland Co., April 11; Kings Co., April 6-15; Hants Co., April 1; Kings Co., March 30 to April 5; Yarmouth Co., March 28 to April 5; Guysboro Co., April 5-15; Antigonish Co., April 4-7; Pictou Co., April 5.

WHITE-THROATED SPARROW.—Charlotte Co., March 31 to April 18; St. John Co., March 26 to April 12; Sunbury Co., April 4-14; Westmorland Co., April 20; Kent Co., May 12-17; Hants Co., April 29; Kings Co., May 8-13; Shelburne Co., May 8-9; Queens Co., May 4.

NORTHERN FLICKER.—Kent Co., April 27 (a flock); Hants Co., April 12; Kings Co., April 24-28; Queens Co., April 19; Antigonish Co., April 20-28.

BELTED KINGFISHER.—Queens Co., April 26; Sunbury Co., April 20; Kent Co., April 20; Hants Co., April 12; Queens Co., May 7-10; Guysboro Co., April 7; Antigonish Co., April 30.

MYRTLE WARBLER.—Queens Co., May 10; Kent Co., May 8-12; Hants Co., May 16; Kings Co., April 24; Yarmouth

Co., April 24; Queens Co., May 5; Antigonish Co., April 21.

BRONZED GRACKLE.—St. John Co., April 12-15; Queens Co., April 4-12; Sunbury Co., March 27 to April 8; Victoria Co., April 16; Westmorland Co., April 4-12; Kings Co., April 4-10; Queens Co., March 25 to April 4; Guysboro Co., April 18; Antigonish Co., April 7-12.

RUSTY BLACKBIRD.—Charlotte Co., March 31 to April 11; Yarmouth Co., April 6; Antigonish Co., April 8-11.

SAVANNAH SPARROW.—Kent Co., April 12; Hants Co., April 28; Kings Co., April 26; Yarmouth Co., April 18-25; Antigonish Co., April 26.

CHIPPING SPARROW.—Charlotte Co., April 1-16; Carleton Co., April 26 to May 18; Kent Co., April 12-18; Kings Co., May 8; Queens Co., May 3-4.

VESPER SPARROW.—Queens Co., April 22-30; Sunbury Co., April 8; Carleton Co., April 28 to May 11; Kent Co., April 29; Antigonish Co., April 28.

PURPLE FINCH.—Kent Co., May 11-16; Hants Co., May 15; Queens Co., April 2.

GOLDFINCH.—Kent Co., May 9-17; Queens Co., (resident throughout the year).

YELLOW WARBLER.—Kent Co., May 20-21; Kings Co., May 16-19; Shelburne Co., May 18-20; Queens Co., May 12.

BOBOLINK.—Queens Co., May 23; Hants Co., May 19; Kings Co., May 18.

LEAST FLYCATCHER (CHEBEC).—Hants Co., May 19; Kings Co., May 15; Queens Co., May 17.

The reports sent to me in some instances were not clear enough to admit of tabulation, e.g., such popular class names as "Blackbirds," "Swallows," etc., were reported, so it was quite impossible to designate the particular species the reporter had in mind. More care should be exercised in this particular. Three species are usually included under the popular name "Blackbirds,"—the Rusty B., the Red-Winged B., and the Bronzed Grackle. The Purple G., is not found in our provinces, but is found farther south; what we often erroneously call the Purple G., is in reality the Bronzed G. The Red-Winged B., is not widely distributed; it seems to be confined chiefly to southern New Brunswick. The distribution of the Purple Martin also presents some peculiarities. It is *very* seldom seen at Wolfville, in the northern part of the Annapolis Valley, while at Windsor, twenty miles away, it is a common summer resident. It is reported from Sunbury, April 13 and 19; Kent, April 26 to May 5; Windsor, N. S., May 25 (date of becoming common).

The Bluebird also seems to be local in its distribution. But one station reported it,—Sunbury, March 24 and April 19. Information regarding the movements, nesting, etc., of any of these birds will be much appreciated.

H. G. P.

THE SUMMER SCHOOL OF SCIENCE.

Summer Schools are certainly growing in popularity. The first year that the writer attended the Summer School of Science, there were not eighty students on the roll, and at that time no other Summer courses were offered in the Maritime Provinces. Last summer, with 225 attending the session at Halifax, the Truro Rural School had as large an attendance as the authorities there desired. This summer, the number that can be accommodated at the new Rural Science School at Woodstock is already made up; there will be the usual large attendance at Truro; and yet the secretary of the Summer School of Science writes, "We have twice as many applications as we ever had in any previous year at this date." This all argues well for the interest and ambition of our teachers, and should add very much to the usefulness of our schools.

There are special inducements to go to Charlottetown this year. Tuition is free, and there are twenty-five or more scholarships offered for competition. Teachers may qualify for the Grade B Certificate in Physical Training, and to all who do so the Department of Militia and Defense will pay a bonus of \$15. There are to be lectures and discussions on methods of teaching. In the English Literature Class some of the set books for High School work in Nova Scotia and New Brunswick will be read, with a view to methods of presenting them in class.

The session of the school at Halifax was a very enjoyable one, but some of the students thought that they were worked too hard. This, we think, rests very much with themselves. It is a mistake for any one who is not particularly strong to fill up all the morning hours with lectures, do laboratory or field work in the afternoon, go to evening entertainments and study for examination late at night. This, as a first year student wrote from Halifax to the Faculty, "sends us back to the schoolroom with more knowledge, but with less energy to impart it." But it is not obligatory. We advise anyone who is planning to attend the school, not to attempt more than three courses in all, and especially not to try for a scholarship if he or she is working for a Physical Training Certificate.

Charlottetown offers a delightful climate,

beautiful surroundings, and restful pleasures. The Classes will all be held in Prince of Wales College, so that no time or strength will be wasted in getting from one class to another.

The only evening lecture definitely announced as yet, is one by the Editor of the Educational REVIEW, entitled "Studies for Delight," but others of interest and profit will be arranged for.

COLLEGE CONVOCATIONS.

UNIVERSITY OF NEW BRUNSWICK.

On Thursday, May 14th, the University of New Brunswick sent forth another band of graduates, and closed another year's excellent work.

Thirty-eight degrees in all were conferred. Seven of these were honorary, and of the ordinary degrees, two were of M.A., eleven of B.A., ten of B.Sc. in civil engineering, five of B.Sc. in electrical engineering, and three the same degree in forestry.

The Douglas gold medal was won by Mr. Emerson C. Rice of Wickham, who is also the winner of the Connaught gold medal, given for Political Economy in the fourth year. The Montgomery Campbell prize for classics was awarded to Mr. Hugh C. Titus, Marysville, and the Alumni gold medal for best translation of a selected prose passage into Latin, by Mr. McMurray Baird, of Fredericton. Miss Marguerite Adams of Hampton received the Brydone Jack scholarship.

Among the graduating civil engineers, Mr. Samuel R. Weston, of Upper Gagetown, took the Ketchum medal for highest standing, and the City of Fredericton gold medal for fourth year work on Public Water Supply, was won by Mr. Walter Melanson, of Moncton. The highest average among the women of the Sophomore class was made by Miss A. Ethel Thurrott, of Fredericton, who thus gained the Alumnae Society's prize. Mr. Charles R. Smith, of Lower Coverdale, took both the William Crocket Memorial Scholarship for first year Latin and Greek, and Dr. Walker's prize for English essay work. The prize for first year chemistry was presented to Mr. Leo C. Kelley of Fredericton; the prize for fourth year electrical engineering to Mr. A. Foster Baird, also of Fredericton.

Professor R. M. Miller, Dean of the Forestry School, delivered the address in praise of the Founders, and argued in defense of the small college, that it gives opportunity for close contact between teachers and taught; and room for the influence of a strong personality. Dr. Berton C. Foster, in his address to the graduating class, pleaded for high standards, for deliverance from love of riches, and for cultivation of love of

Nature, literature and art. Dr. A. Stanley MacKenzie, of Dalhousie University, in the Alumni Oration, spoke upon the connection of the University and the state, and urged the graduates to consider the duty and honour of bringing their trained minds and consciences to public service. The Valedictory was delivered by Mr. Robert Leslie Simms.

Of the honorary degrees, the degree of LL.D., was conferred upon Sir Frederic E. Barker. Mr. Justice Grimmer, Mr. Justice Crocket, Mr. Justice Barry and Dr. H. S. Bridges. The honorary degree of M.A., was conferred on Miss Mary K. Tibbitts, the first woman graduate of the University, and the degree of M.Sc., in Forestry upon Col. T. G. Loggie, Deputy Minister of Lands and Mines.

There will probably be no changes in the University staff this year.

KING'S COLLEGE ENCOENIA.

The ceremonies of Encoenia Day, May 14th, began with the celebration of the Holy Communion in the College Chapel at 7.30 a.m. The usual procession of Collegiate School boys and all members of the University, formed at ten o'clock, and marched to the parish church where service was held. The preacher of the day was the Canon Frederick George Scott, of Quebec.

In the afternoon the annual meeting of Convocation took place in Convocation Hall, the Chancellor of the University, Chief Justice Sir Charles Townshend, presiding. Degrees were conferred as follows: The honorary degree of D. C. L., upon Rev. Canon Scott, the well known poet and hymn writer; Ven. T. F. Draper, Archdeacon of Cape Breton; J. H. Plummer, president of the Dominion Steel Corporation. The degree of D. D., *jure dignitatis* upon Very Rev. A. J. Doull.

The following received the degree of M. A.: Very Rev. A. J. Doull, M. A., (Oxon.), *ad eundem*. Rev. A. W. Teed, M. A., (U.N.B.) *ad eundem*; H. W. A. Wadley, Esq., M. A., (Cantab.) *ad eundem*. Rev. R. M. Fenton, B. A., Rev. W. R. Martell, B. A., Rev. W. T. Suckling, B. A., L. H. Martell, B. A., N. H. Wilcox, B. A.

Degree of B. A.: D. M. Wiswell, J. H. A. Holmes, H. G. Morrison, A. F. Bate, Rev. A. H. Powell, M. P. Maxwell, L. T. Wilkinson, C. E. Knickle, B. F. Porter.

Degree of B. C. L.: Ralph Perley Hartley, B. A., Robert Holland Tait, B. A.

The valedictory was read by G. H. Morrison, of the graduating class. After the prize giving, the Alumni Oration was delivered by the Rev. B. W. Roger Tayler, D. D. A brief address was made by the Chancellor, congratulating the Faculty upon the present condition of the

College, and an interesting paper was read by J. H. Plummer, D.C.L., upon "Industrial Development in the Maritime Provinces and the part that University Men should take in this Work."

All the meetings of the different Associations were marked by a spirit of encouragement and hope. The year has been an excellent one, both for the University and the Collegiate School. The matter of providing a residence for women students is under consideration.

THE YEAR AT MOUNT ALLISON.

The year at Mount Allison has passed quickly and quietly. Although the collective body of students has numbered over six hundred, there have been few cases of illness of any kind, and none that were infectious or serious.

All three branches of Mount Allison, the Academy, Ladies College and University, have had a good attendance. Indeed the problem of accommodation is becoming somewhat serious.

The influx of engineering students has been this year so large,—some thirty-eight new men—that the rooms in the science building will be overtaxed next year.

The question of providing a new science building was discussed at the meeting of the Board of Regents, and a generous donor offered \$10,000 in addition to a previous subscription of a like amount. This, with a number of smaller subscriptions and one or two large ones in prospect, suggests that the funds required may be procured so that the building will be ready for use in 1915.

The science work at Mount Allison is suffering a loss in the resignation of Dr. Bigelow, Professor of Chemistry. He goes to Brown University. He graduated at Mount Allison before going to Harvard; and has been so connected with various sides of Mount Allison life, that his place will be hard to fill. Not many other changes are anticipated in the staff. Two of the Ladies' College teachers have leave of absence for the year. One will spend it in abroad. Miss Annie Sprague, B.A., who has been acting Vice-Principal of the Ladies' College during the year, has succeeded admirably and will probably assume the position permanently.

The Student government at the Residence, which was inaugurated a few years ago, has passed the stage of trial, and is now worked out in careful detail. A similar method has been adopted for the Annex of the Ladies' College occupied by the young women of the University, and is developing satisfactorily.

At the closing of the year in the Academy, eleven received certificates of matriculation, thirteen graduated in book-keeping, and over twenty in shorthand. From the Ladies' College nineteen received diplomas in music, or household

science, in arts and crafts, or in the school of expression. At the University Convocation the class receiving the degree of B.A. was smaller than usual, consisting of three young ladies and thirteen men. Four received certificates in Applied Science, and ten in theology. The degree of M.A. in course, was conferred on three candidates, and the honorary degree of D.C.L., on two men, both former Mount Allison graduates—one being H. A. Powell, K.C., of St. John, a member of the International Waterways Commission. An important event at the Convocation was the presentation of an illuminated address from the Board of Regents, Alumni, and Faculty, to Dr. R. C. Weldon, Mount Allison, '66, who was a former Mount Allison professor, and is now retiring from many years of service as Dean of the Dalhousie Law School in Halifax. The address was presented by His Honor Lieut-Governor Wood, a fellow-student and life-long friend of Dr. Weldon, and short addresses were delivered by Dr. Smith, Professor of Classics, and Dr. Allison, formerly president of the University.

During the year, Mount Allison appointed as Rhodes Scholar for New Brunswick, Mr. William H. Irving, who graduated in 1912, and who has since been a teacher in the High School at Moncton. Mr. Irving has the highest qualifications both personally and educationally, and is expected to continue his good record after taking up his residence at Oxford in October.

ST. FRANCIS XAVIER.

The commencement exercises of St. Francis Xavier College were held on May 12th, when the Assembly Hall was crowded to the doors. The Salutatory was delivered by William Noblett, the subject being History and National Life. After the Salutatory the degree of M. A. was conferred upon: William Randolph Walsh, St. John; Professor E. W. Connolly, Truro; Vincent Burke, Inspector of Schools, St. Johns, Nfld. Thirteen students, two of whom were women, received the degree of B.A.

The Class Essay was read by Frederick Guthro of Glace Bay. It was called "A Poet's Outlook on Life," and based upon Matthew Arnold's poem "Rugby Chapel."

After the prizes in the various departments had been presented, the Valedictorian, Mr. Angus L. MacDonald, of Port Hood, gave an excellent address on "Literature and National Life."

The Very Reverend D. Thompson addressed the students briefly, urging them to be true to the principles instilled at St. Francis Xavier, and prophesying useful futures.

The baccalaureate sermon was preached by Rev. D. C. Gillies on the subject of modern

thought. In the evening the College Alum held their annual dinner at St. George's hotel.

ACADIA UNIVERSITY.

The seventy-sixth anniversary of Acadia occurred the last week in May. The visitors were numerous and the weather delightful, although the orchards had not advanced sufficiently to show the beauty of their bloom. The baccalaureate sermon was preached by Dr. Matthews, Dean of the Divinity School of the University of Chicago, and the address on Sunday evening, before the College Y.M.C.A., was delivered by Dr. MacDonald who recently assumed the editorship of "The Maritime Baptist." The combined attendance at these Baptist schools for the year just closed was seven hundred and fifty-five. From the College thirty-one graduated in the B.A. course, four in the B.Sc. course, and three took the B.Th., degree. Eleven persons took their M.A. and nine engineering certificates were given. The honorary degree of D.C.L. was conferred upon Mr. I. B. Oakes, long connected with the educational work of these Provinces, and the same degree was granted to a well known Canadian surgeon of Montreal, Dr. W. W. Chipman. Rev. E. D^f Webber, formerly of Wolfville, now of Haverhill, Mass., was made a D.D.

Last autumn a fire-proof Library building, the need of which has long been felt, was commenced, and that structure of stone is now steadily advancing. On the first of May excavation began for a new College Residence for women, and it is expected that this edifice of brick and stone will be ready for use at or near the opening of the next College year. During commencement week the College Residence for men, known as "Chipman Hall" was totally destroyed by fire, as was also the Gymnasium. But no time was lost by the Governing Board in beginning to make provision for the need so suddenly created. Four days after the fire the first sod was turned for a new Men's Residence, to be made of brick with stone facings. The students have generously subscribed for a Gymnasium and a Rink, so that the expectation is that without much delay, these buildings will also be secured. Aside from smaller gifts, there have come to Acadia in the past year three bequests especially worthy of mention, the first from Mr. Cramp, a lawyer of Montreal, amounting to one hundred thousand dollars, the second, forty-five thousand, from Mrs. Tedford, of Yarmouth, N. S., and the third, of thirty thousand, from Mr. Joshua Goodwin, St. John, N. B.

R. Y. E.

FOR FRIDAY AFTERNOONS

SUMMER DAYS.

Winter is cold hearted;
 Spring is yea and nay;
 Autumn is a weathercock
 Blown every way:
 Summer days for me,
 When every leaf is on its tree.

— Christina G. Rossenti.

BEES.

Bees don't care about the snow:
 I can tell you why that's so:
 Once I caught a little bee,
 Who was much too warm for me.

— Frank D. Sherman.

JUNE EXAMINATIONS.

What do you think the daisies said,—
 The laughing, swaying mass,
 Today as from exams I came,—
 "Lousia, did you pass?"

Then all the clover-blooms called out,
 Like children in a class,
 And these were just the words they said,
 "Louisa, did you pass?"

Out rang the winds, out sang the birds,
 Out spoke the tall June grass,
 The merry brook paused just to ask,
 "Louisa, did you pass?"

I hurried home to shut them out,
 And there I found — alas —
 Mama and Grandma, and they said,
 "Louisa, did you pass?"

— ALICE E. ALLEN, in the Farmer's Wife

COMPARISONS.

By LAURA CHAUNCEY PECK.

The robin cannot even talk;
 He hops along the garden walk,
 And from his look it's plain to see
 That he would like to play like me.
 I'm sure he quite dislikes a worm;
 He has to eat them when they squirm.
 It's strange, no matter how I try,
 I never can make out to fly.
 And tho' I work my very best,
 I cannot build a robin's nest.

—Youth's Companion

THE BIRTHDAY GIFT.

By LOUISE TAYLOR DAVIS.

Last week I had a birthday, and my father said to me,
 "I'll give you anything you want. Now, son, what shall
 it be?
 How would you like a phonograph?" But I just answered
 "No.
 I'd rather have a puppy, 'cause a puppy loves you so!"

So then he laughed and said that he would try and get a
 pup,
 And on my birthday morning, the minute I woke up,
 The fattest little furry dog was sitting on my bed!
 There's nothing in the world that I'd rather had instead.

He follows me around all day and sleeps with me at night;
 He loves to bark at me and growl, and then pretend to
 bite.

His little legs are wobbly, and he can't run fast, but oh!
 I'm glad I've got that puppy, 'cause a puppy loves you so!

— Exchange

A DANDELION STORY.

A dandelion grew in a garden plat
 In the shade of an old stone wall;
 Her slender leaves made an emerald mat,
 Where the stem grew straight and tall.

In the cool spring days she had worn a hood
 That was small and tight and green;
 She wore it as long as she possibly could,
 Till many a hole was seen.

Then she sent down word through her stem and
 mat
 To the storehouse under her feet,
 That she needed at once a bright new hat,
 With trimmings and all complete.

It was fine as silk and yellow as gold
 Like a star that had fallen down;
 With brightest trimmings and all complete
 The gayest hat in town.

And she next wanted a summer hat,
 Adorned with small white plumes;
 So they sent her one, in place of that
 They had sent with yellow blooms.

For many a day she waved and danced,
 And bowed to the birds and bees;
 For many a day the sunbeams glanced
 Through leaves of the friendly trees.

But a brisk little wind went by one day,
 "Please give me your hat!" he cried.
 He carried the little white plumes away,
 And scattered them far and wide.

— Exchange

THE QUESTION BOX.

1. SUB.—Is there a railroad from Capetown to Cairo in Africa? If so, will you name the chief stations?

The Cape-to-Cairo railway must as yet be looked upon as no more than a remote possibility. In South Africa there is a railway running northward from Capetown for a distance of about two thousand miles, passing through Kimberly and Bulawayo, and crossing Zambesi at Victoria Falls. It is a part of the system of government railways; and as such, of course, cannot be extended beyond the limits of South Africa. Another railway runs southward up the Nile from Cairo to Khartum. The distance between these two railways is spanned in part by navigable rivers and lakes; but there are hundreds of miles of railways still needed to make connection with these. In the meantime the growing commerce of Central Africa can reach either the east or the west coast by a shorter route over existing railways.

2. A. S.—Why is the top of a map called north, and the lower end south?

2. This is not always the case. We sometimes see a map or plan drawn obliquely with respect to the meridian; in which case an arrow or some other device is drawn to show the true line of the meridian. There is an understanding among map makers that when the direction is not so indicated the lines running up and down on the map shall be regarded as running north and south.

3. R. W. F.—Correct the following sentences, giving reasons.

3. The sentence, "There was no one in the room but him and me" is correct. "But" here is "except," and is a preposition governing the pronouns "him" and "me" in the objective case.

In the sentence "I am very pleased to meet you," "very pleased" is assumed to be the doubtful phrase. This is a question, not of grammar, but of good usage. Whether "pleased" is considered as an adjective or a participle, an adverb may modify it. But it is not customary to use the adverb "very" alone to modify a past participle. We say "very charming," "very exciting" but "very much charmed," "very much excited," "very much pleased."

4. Give a concise account of the life of Lord Strathcona.

4. Donald Alexander Smith was born at Archlestone, Morayshire, Scotland, in 1820. He

received his education at a local school, and, in 1838, as a stripling of 18, he came to America and entered the service of the Hudson Bay Company. He spent thirteen years of his life on the Labrador coast, and was afterwards stationed in the Northwest. He rose step by step to be chief factor. Subsequently he was named resident governor and chief commissioner of the Company in Canada. As a public man he first came into prominence in connection with the Red River insurrection, 1869, being in December of that year appointed a special commissioner by the Dominion government to inquire into the circumstances connected with it. In the next year he was returned to the legislature of the newly organized province of Manitoba. He was also called to the Northwest territorial council, and was returned for Selkirk to the House of Commons. In 1874 he resigned his seat in the legislature, but remained in the Dominion House until 1880, when he was defeated at a by-election. He re-entered the House of Commons, in 1887, as a member for Montreal West. In April 1896, he retired from political life in Canada, taking the high commissionership, which he held until his death. In 1896 he also became Chancellor of McGill University, an institution to which he gave a great deal of money. His benefactions are too numerous to give in detail. He was made Sir Donald Smith in 1886, and in 1897 was created a peer, with the title of Lord Strathcona and Mount Royal. He died in January, 1914, and was buried in Highgate Cemetery, North London. The funeral service was held in Westminster Abbey.

R. W. F. sends also five questions in geography. The answers to them would take more room than can be spared.

Five hundred teachers of English have been gathered in Tokyo, Japan, for their second conference in the history of that country. About five per cent of these were English and American men and women. The programme occupied ten days, and the entire proceedings were in English. The rapid spread of the study of English is very striking. In the secondary schools alone in Japan, there are upward of 100,000 boys and girls studying English as a part of their course. The boys in these schools must study English seven hours in each week for five years, and the girls at least half that time, and as Japan claims the largest percentage of school attendance of any country in the world, it is safe to say that within a few generations English will be almost universally spoken there.

SUMMER SCHOOL OF SCIENCE

FOR ATLANTIC PROVINCES OF CANADA

Session of 1914 at Charlottetown, P. E. Island, July 7th to 29th

NATURAL SCIENCES, LITERATURE, ETC., TAUGHT. SPECIAL ATTENTION
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CURRENT EVENTS.

The Panama Canal is actually open for business, though the formal opening will not take place until the beginning of next year.

Nothing has yet been heard of the Karluk, the principal ship of Stefansson's expedition, which disappeared last October, being carried off by an ice floe while the leader and some of his assistants were on shore. It is feared that she may never be heard from again.

Sir William Willcocks, the eminent British engineer who built the Assouan dam in Egypt and has more recently been engaged in a similar work in Mesopotamia, has been invited to visit the United States and discuss the flood problems on the Mississippi. His advice is that they should build their dams bigger. The Babylonians, he says, never built a dyke less than a hundred feet wide. He has also given advice in respect to drainage for the prevention of the diseases carried by mosquitoes. At Khartum, in the Nile valley, were found the worst and most malignant mosquitoes, yet the drainage there is so perfect now that a man is fined twelve shillings for every mosquito seen on his place.

A new constitution for the Republic of China has been promulgated. It gives the President much greater powers than he possessed under the former constitution, including the sole control of the army and navy. The rebels under White Wolf seem to have been scattered, and the insurrection is virtually suppressed; but another rebellion is threatened under the leadership of Sun Yat Sen, the former provisional president.

The campaign against opium smoking in China has reached such a point that in one city persons under forty years of age if found smoking the drug are to be shot, and those over forty who indulge in the practice will be sentenced to penal servitude.

In England and Scotland, the crimes of the suffragettes are increasing in violence, and they are now openly threatening the life of the King; yet the government refuses to take the movement as a serious matter, and everybody but the suffragettes themselves recognizes that it is a complete failure.

The Home Rule Bill, which reestablishes the Irish Parliament, passed its third and final reading in the British House of Commons on the twenty-fifth of May, and was sent to the House of Lords. The Lords will probably reject it; but under the new Parliament Act it may become

law without their approval, having been passed three times by the same Parliament.

Prince William, the new ruler of Albania, refused to let his minister of war, Essad Pasha, raise an army to put down the Epirote rebellion; and the latter resigned and joined the insurgents. Essad was arrested and banished from the country, but the insurrection continued, and the situation is serious.

Fortunately the REVIEW's estimate of the credibility of latest rumors is seldom so far astray as it was last month in regard to the Mexican news. Salina Cruz and Manzanillo were not attacked by United States forces, and Zapata has not joined Huerta nor accepted his offer of amnesty. Since the first of May the Constitutionalists or northern rebels have taken Tampico. With this port in the hands of the rebels, and the United States still holding Vera Cruz, Huerta has lost his two chief ports on the gulf coast. A third, however, called Puerto Mexico (Mexico Port,) the eastern terminus of the Tehuantepec railway, is still open; and through this he has received two large shipments of arms and ammunition from Europe, which will greatly strengthen his resources. Hostilities between the United States and Mexico are suspended during the mediation conference, which is being held at Niagara Falls, on the Canadian side of the river.

The South American mediators, who hope to find some way of averting the war between Mexico and the United States, began their conference at Niagara Falls on the twenty-sixth of last month. The United States has sent three representatives to the conference, and Mexico three. It is expected that Carranza will also send a representative: Though the doings of the conference are secret, there is reason to believe that a settlement may be reached; and that peace between the two republics and peace between the warring factions in Mexico may be the outcome. The conference itself is a notable event, as it marks the beginning of South American influence in the affairs of North America.

The sinking of the Canadian Pacific steamer Empress of Ireland near Quebec, on the morning of the twenty-ninth of May, by which over a thousand lives were lost, is the worst marine disaster since the loss of the Titanic. She was outward bound, and, having just dropped her pilot at Father Point, was ready to proceed on her voyage, when she was struck by a coal laden vessel, and sank before there was time to launch her boats. Among the lost were many of the leaders of the Salvation Army in Canada, who were on their way to attend a world congress in London.

New Brunswick School Calendar, 1914-1915.

1914.	FIRST TERM.	Dec. 18.—Normal and Public Schools close for Christmas Vacation.	May 24.—Last Day on which Inspectors are authorized to receive applications for Departmental Examinations. Reg 38-6.
July 1.—	Dominion Day (Public Holiday).	1915.	SECOND TERM.
July 7.—	Departmental Examinations begin.	Jan. 4.—	Normal and Public Schools open.
July 13.—	Annual School Meetings.	Apr. 1.—	Schools close for Easter Vacation.
Aug. 5.—	Normal School opens for French Candidates.	Apr. 7.—	Schools re-open after Easter Vacation.
Aug. 26.—	Public Schools open.	May 18.—	Loyalist Day (Holiday for St. John City only).
Sept. 1.—	Normal School opens.	May 23.—	Empire Day (Observe 21st).
Sept. 7.—	Labor Day (Public Holiday).	May 24.—	Victoria Day (Public Holiday).
	Thanksgiving Day (Public Holiday).		
Dec. 15.—	Examinations for Class III License begin.		
			May 25.—Examinations for Class III License begin.
			June 3.—King's Birthday (Public Holiday).
			June 4.—Normal School Closing.
			June 8.—Final Examinations for License begin.
			June 21.—High School Entrance Examinations begin.
			June 30.—Public Schools close for Year.

It is announced that Queen Mary's brother, the Duke of Teck, will be the next Governor General of Canada. His Serene Highness Prince Alexander of Teck is an Englishman by birth, and served with distinction in the South African war. He is a great-grandson of King George III, and a son of the Princess Mary Adelaide, daughter of the late Duke of Cambridge. His wife, Her Royal Highness the Duchess of Teck, is a grand-daughter of Queen Victoria.

It is understood that the Russian government will not only offer a subsidy for steamship service to Siberia by the Kara Sea route, but will establish a wireless telegraph station at the mouth of the Yenisei, and establish an ice patrol of small vessels equipped with wireless telegraph and reporting their observations to the land stations.

A wall two miles long has been built to prevent the Rangoon River from taking a new course and leaving the town and port of Rangoon.

The total tonnage of British merchant ships is given as something over twenty million tons; which is nearly one third greater than that of all the other maritime powers combined. The German merchant tonnage, which comes next, is a little less than five million tons.

A lighting projectile invented in Germany is filled with calcium carbide. On being fired from a cannon, and falling in the water, it rises and floats, and the acetylene gas set free by the moistening of the carbide ignites spontaneously, producing a light of three thousand candle power.

SCHOOL AND COLLEGE.

Halifax schools celebrated Empire Day by a great meeting in the Arena Rink. Nearly 8,000 children were present, and a great many visitors. Addresses were made by R. V. Harris, Esq., Chairman of the School Board, Mayor Bligh, Bishop Worrell and others. National songs were sung to the accompaniment of the Royal Canadian Band. The most interesting part of the programme was the unfurling of a Union Jack sent by the school children of Halifax, England, to the school children of Halifax, Nova Scotia.

During the early hours of Monday, May 26th, the gymnasium of Acadia University and Chipman Hall, the

men's residence, were burned to the ground. Other buildings were saved by great efforts on the part of the firemen. The origin of the fire is unknown.

Miss Clara W. Fritz and Miss Rosalie Waterman, both of St. John, won distinction among McGill students this year, Miss Waterman taking first class honours in classics, and Miss Fritz, first class honours and the gold medal in biology, the Penhallow prize for botany, and a scholarship of \$150.

Mayor W. E. Outhit, Instructor and Inspector of Cadet Corps for Nova Scotia, has gone to Calgary, Alberta, where he takes the same post under the Militia Department that he has held in Nova Scotia for some years. The transfer is in the nature of a promotion in recognition of his services to the Cadet movement. This movement in the Dominion owes more to Major Outhit than to any other person.

Few men have worked at educational business as long as Mr. Charles A. Sampson, of Fredericton, who is now entering upon his thirty-eighth year of service as Secretary to the School Board of that city. Mr. Sampson has seen many changes and much advance in the educational world during his long term of office. Commenting upon this the Fredericton Gleaner says: "Thirty-seven years ago our male teachers received salaries ranging from four hundred to six hundred dollars, and the ladies had to try to be contented with an income of two hundred to two hundred and fifty."

A Cadet corps is to be organized in the St. John High School, with Mr. C. M. Lawson as instructor.

Miss Sadie L. Thompson, Principal of Charlotte Street School, Fredericton, leads all the teachers in the Physical Training Course at Ottawa, making a mark of 100 in theory and teaching.

Mr. John Hamilton Lane Johnstone, of Pictou, for the last two years instructor of Physics at Dalhousie University, has been nominated by that institution for the 1851 London Exhibition Science Research Scholarship, worth \$750 a year for three years. Mr. Johnstone has further been awarded the Currier Fellowship at Yale, worth \$400.

Plans are now being prepared for the construction of an Agricultural School at Sussex, N. B. About \$40,000 is to be spent upon the building.

RURAL SCIENCE SCHOOL

TRURO, N. S.

**The Rural Science School will open at Truro, Wednesday, 10 a. m.,
July 8, 1914, and will close Thursday evening, August 6.**

Classes are open to teachers of Class A, B and C, who are recommended by the Normal College Faculty. Those of Class B and C who are strongly recommended by an Inspector are also admitted.

Application for admission must be made before June 30. The Course of Study follows:

COURSE OF STUDY

1. All Candidates for R. S. Diploma shall be required to complete satisfactorily the following courses: (a) Nature Study—1 hr. per week for 1 term, (b) Horticulture—3 hrs. per week for 1 term, (c) Biology—2 hrs. per week for 1 term, (d) Botany—6 hrs. per week for 2 terms.

2. Candidates shall elect as "majors" one subject from each of the groups A and B following

- A Entomology.
- Chemistry.
- B Economic Zoology.
- Agriculture.

Each of the major courses elected shall involve as a minimum 6 hrs. per week class and laboratory work for two terms.

3. Candidates shall elect any two of the following as "minors," involving as a minimum two hours per week class and laboratory work for one term: (a) Bacteriology, (b) Brush and Cardboard Work, (c) Woodwork, (d) Mechanics, (e) Wether-work, (f) Geology and Soil Physics, (g) Birds, (h) Plant Diseases.

4. Work done in the Normal College in the following courses will be credited to the candidate for a Rural Science Diploma: (a) Brush and Cardboard Work; (b) Woodwork; (c) Wether-work.

Buy a single ticket and procure a Standard Certificate

For further particulars see Journal of Education, October, 1913. For list of boarding houses and similar information, apply to

E. W. CONNOLLY, REGISTRAR

Miss Chipman, a graduate of King's College, Windsor, N. S., has been made president of the University Women's Club of Vancouver.

Empire Day was observed at the Consolidated School, Kingston, N. B., with a ceremony of more than usual interest. After a programme of songs, recitations and speeches had been carried out in the assembly hall of the school, the pupils marched to the burial ground and placed flags on the graves of the Loyalists who are buried there. The meeting was largely attended and was addressed by the Chief Superintendent, Inspector Brooks, and Mr. R. P. Steeves, Director of Elementary Agricultural Education. Dr. Carter, in a stimulating speech, dealt on the responsibilities and duties of British citizenship, and urged intelligent appreciation of the work of the Loyalists.

That "blood is thicker than water" is exemplified by the formation at Moose Jaw last month of an Association to be composed of teachers in Saskatchewan who formerly taught in the Maritime Provinces or who are natives of these provinces. The charter members present at the meeting numbered nearly fifty and as many more are expected to join as soon as an organization programme is launched.

The new association bears the name "Maritime Provinces Teachers' Association of Saskatchewan." The idea originated with H. W. Hewitt, a former Nova Scotia teacher and newspaper man now resident in Saskatoon.

He sent the "fiery cross" among the teachers gathered at Moose Jaw on the occasion of the annual meeting of the Provincial Educational Association and when, in the midst of conflicting events, enough had gathered together to make a start, explained his proposition, which was enthusiastically accepted by all present. In quick order organization was completed, the following office bearers being elected: President, H. W. Hewitt, Saskatoon; Vice-President for Nova Scotia, Miss Bertha Oxner, Saskatoon; Vice-President for New Brunswick, J. M. Nason, Watrous; Vice-President for Prince Edward Island, Miss K. Rowe, Macklin; Secretary-Treasurer, Charles I. Macnab, Saskatoon; Editor in chief of the association's organ, H. W. Hewitt, Saskatoon.

Once a year the members will meet at the banquet table when old acquaintances will be renewed and new friendships formed. The traditions of the home provinces will be maintained. Means will be taken to keep former and present Maritime Provinces teachers and former Maritime teachers in touch with one another, through exchange of ideas, objects, etc. All will unite to honor the old home, to bring about a better understanding between the east and the west, and to give a welcome and correct information to intending newcomers. District associations will be formed, which will be the nucleus for the district of Maritime Provinces gatherings during the winter months.

OFFICIAL NOTICES.

N. B. HIGH SCHOOL LITERATURE COURSE.

(To go into effect July 1, 1914.)

GRADE IX.—Dickens' — Christmas Carol.

Cricket on the Hearth.

Scott's— Lay of the Last Minstrel.

GRADE X.—Lamb—Essays of Elia, omitting the last essays.

Parkman — Oregon Trail.

Burns — Shorter Poems, as in Oxford Edition
edited by J. Logie Robertson.

GRADE XI.—Shakespeare — Merchant of Venice.

Thackeray — Henry Esmond.

Milton — Paradise Lost — Books I and II.

Carlyle's Essay on Burns.

The above texts may be obtained with notes from:—

The MacMillan Co. of Canada, Ltd., Toronto.

The Copp Clark Co., Ltd.

Oxford University Press, 35-37 Richmond St. West,
Toronto.Chas. E. Merrill Company, 432 Fourth Ave., New
York City.W. S. CARTER,
Chief Supt. of Education.

Approved by the Board of Education.

(To go into effect July 1st, 1914.)

NATURE STUDY AND AGRICULTURE.

COUNTRY SCHOOLS (UNGRADED).

GRADE I.—As in authorized Nature Study and Agriculture
Course, with School Gardening, where possible.
Drawing. Study and care of the home.GRADE II.—As in authorized Nature Study and Agriculture
Course, with School Gardening where possible.
General local geography. Estimation of distances,
sizes and weights in a general way. Drawing of
common objects, as fruits, vegetables, simple leaves,
domestic animals, etc. Study and care of the home,
continued.GRADE III.—As in authorized Nature Study and Agricul-
ture Course. School Gardening, where possible.
Field excursions, with out-door lessons. Language
exercises, both oral and written, based on work done
in Nature Study. Household Economy.GRADE IV.—As in authorized Nature Study and Agricul-
ture Course. School Gardening, where possible, con-
tinued. Experimental School and Home Plots. In-
troductory Household Economy (practical where
possible).GRADE V.—As in authorized Nature Study and Agriculture
Course. Agricultural experimentation. Insects, weeds,
soils, economic plants and animals. Elementary
Chemistry of Oxygen, Hydrogen, Nitrogen and Carbon.
Photosynthesis, Respiration, Transpiration in plants.
Show presence of starch, sugar, water, mineral matter,
etc., in plants. Simple analysis of starch, sugar,
wood, etc. School Gardening, continued. Sanitation.
Household Economy.

NATURE STUDY AND AGRICULTURE.

GRADED SCHOOLS.

GRADE I.—As in Nature Study and Agriculture Course,
with School Gardening, where possible. Drawing.
Study and care of the home.GRADE II.—As in Nature Study and Agriculture Course.
School Gardening, continued, as above. General local
geography, estimation of distances, sizes and weights
in a general way. Drawing of common objects, as
fruits, vegetables, simple leaves, domestic animals.
Study and care of the home, continued.GRADE III.—Selected work from authorized Nature Study
and Agriculture Course for Grade III ungraded, with
School Gardening, as above. Language exercises, both
oral and written, descriptive of observation lessons.
Study and care of the home, continued.GRADE IV.—Authorized Nature Study and Agriculture
Course for Grade III ungraded, completed. School
Gardening, where possible. Field excursions, with
out-door lessons. Oral and written language exercises,
continued. Study and care of the home, continued.GRADE V.—Selected work from authorized Nature Study
and Agriculture Course for Grade IV ungraded.
School Gardening, where possible. Experimental
School and Home Plots. Paragraph descriptions of
particular trees, birds, insects, etc., and accounts of
work done or observations made. Introductory House-
hold Economy.GRADE VI.—Authorized Nature Study and Agriculture
Course for Grade IV ungraded, completed. School
Gardening, where possible. Short essays on Nature
Study subjects of local interest. Experimental School and
Home Plots. Household Economy.GRADE VII.—Selected work from authorized Nature Study
and Agriculture Course for Grade V ungraded. Agri-
cultural Experimentation and Practical School Gardening,
where possible. Soils, their composition. Intro-
ductory work in Chemistry (Oxygen, Hydrogen,
Nitrogen, Carbon). Household Economy. Essays on
parish or county industries and developments.GRADE VIII.—Authorized Nature Study and Agriculture
Course for Grade V ungraded, completed. School
Gardening, where possible. Plants and animals, their
composition and food. Elementary Chemistry, con-
tinued. Photosynthesis, Respiration, Transpiration, in
plants. Show presence of starch, sugar, water, mineral
matter, etc., in plants. Simple analysis of starch,
sugar, wood, etc. Household Economy. Competitive
practical work in agricultural lines, chiefly at home.
Essays on subjects suggested by practical work done.

REFERENCE BOOKS.

First Book of Rural Science, J. J. Green.....	\$0 40
Elements of Agriculture, G. F. Warren.....	1 10
The Soil, F. H. King.....	1 50
Practical Garden Book, Hunn & Bailey.....	50
Principles and Practices of School Gardening, A. Logan.....	1 00

Life Histories of American Insects, Weed.....	50
Published by The MacMillan Company of Canada, Ltd., Toronto, Ont.	
Domestic Birds, J. H. Robinson.....	\$1 35
Agriculture for Beginners, Burkett, Stevens & Hill....	75
Published by Messrs. Ginn & Company, Boston, Mass.	
Hand-book of Nature Study, A. B. Comstock.....	\$3 25
Bird Note-book Nos. 1 and 2, A. B. Comstock.....	30
Published by The Comstock Publishing Company.	

W. S. CARTER,
Chief Supt. of Education.

Education Office, May 1st, 1914.

Elementary Agricultural Education.

REGULATIONS OF THE BOARD OF EDUCATION.

1. Any Board of School Trustees that provides for and satisfactorily maintains instruction in Elementary Agriculture with School Gardening, in accordance with the course prescribed by the Board of Education in this subject, shall be entitled to receive a special grant of thirty dollars per school year. In case, however, the full amount of such grant has not been expended for such maintenance, as shown by a statement of expenditure submitted by the Board of School Trustees at the close of each term, the payment of an amount equal to that expended shall be made.

2. The grant to Boards of School Trustees for the first year, after Agricultural Instruction with School Gardening has been undertaken as a permanent and integral part of the school work, shall be fifty dollars, and thereafter as specified in Regulation 1 above.

3. The Minister of Agriculture shall pay to the certificated teacher who carries on this work satisfactorily, as shown by reports of the Director, a special grant, at the rate of fifty dollars per school year.

Teachers with only one session of special training in Elementary Agriculture with School Gardening shall, upon the recommendation of the Director, receive a special grant for satisfactory teaching in this work, at the rate of thirty dollars per school year.

4. In all cases the amounts paid for this special work to both teachers and School Boards must be approved and recommended by the Director.

5. School officers intending to introduce or to continue this work, and to qualify for the grants, must give notice to the Director of such intention on or before the first day of September, or the seventh day of January in each school year. This notice shall be signed by the Trustees, or their Secretary by order of the Board, and by the teacher.

6. The time to be allotted to this work shall be not more than one and one-half hours per week during the school year.

7. Throughout the year the teacher shall record from week to week on a form supplied by the Director, the work carried on in the garden and the instruction given in the school, specifying the subjects taken up and the

method followed. At the end of each term these records shall be included in the Agricultural Instruction Return. These weekly Records shall be available to both Inspectors and Director at all times.

8. At the meeting of the Board of Education before the end of each school year, there shall be apportioned from the amount of money set apart by the Minister of Agriculture for Elementary Agricultural Education, a fund to be used for the encouragement of schools and pupils, to be applied as prizes in School Garden, home plot work and school fairs.

For this purpose each County shall form a unit for distribution. All work thus encouraged shall be carried on under the instruction and supervision of the teachers in the public schools.

9. At the same time an amount shall also be determined upon for the improvement of school grounds, which afford an opportunity for the care and study of trees, shrubs and vines, for the purchase of pedigreed seeds and bulbs and for extending such practical work along agricultural lines and the improvement of country life.

10. When the equipment on which special grants to Trustees have been paid remains unused for two years, said equipment may be transferred, on recommendation of the Director, to another school in the Province.

NOTE.—The pupils receiving instruction in this subject should be encouraged to make notes and records in a systematic manner, having special reference to Nature Study observations, agricultural conditions and school garden work. These record books should receive recognition in determining the standing of pupils. Care should be taken to interest and encourage pupils, rather than to urge them in this special work.

W. S. CARTER,
Chief Supt. of Education.

Education Office, May 1st, 1914.

Interprovincial Teachers' Institute

N. S., N. B., and P. E. I,

To Meet in the Technical College, Halifax

Aug. 26, 27 and 28th, 1914

N. B. Teachers are requested to note, that there will be no Provincial Institute held this year, but that all are urged to attend the Interprovincial Meeting at Halifax. There are many matters of importance and mutual interest to discuss.

For all Teachers who attend the Halifax Meeting the public schools will reopen after the summer vacation Aug. 31. For all other teachers, schools will reopen Aug. 26.

A full programme with necessary information will be published.

Make your plans early to attend.

GEO. A. INCH,

Sec'y N. B. Prov. Teachers' Ins

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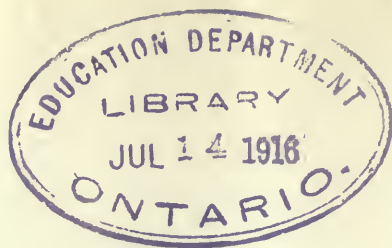
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Devoted to Advanced Methods of Education and General Culture

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Instead of a number your address label now bears the date to which your subscription is paid. Please consult it, and if you are in arrears, remit promptly.

The REVIEW was not published in July. The June issue should bear the numbers:—Vol. XXVIII, Nos. 1-2, Whole Number 325-326.

The Picture Supplement that we present with this number is a reproduction of a painting by Sir John Millais, called "A Flood." It is a picture that children will enjoy telling or writing stories about.

Our Empire Day picture, "The Boyhood of Sir Walter Raleigh" is also by Millais, but in our supplement a misprint unfortunately disguises the artist's name.

The Interprovincial Education Convention of the Maritime Provinces will meet in the Technical College, Halifax, on the 26th, 27th and 28th of August. The provisional programme and information concerning attendance will be found on another page.

All interest centres in the war. A clear statement of the causes and the beginnings of this awful struggle is given in another column. Our country is free from blame. No selfish motives can be laid to her charge. All that they could do for peace, our rulers did. "No country ever went into war with better heart or clearer conscience," says Sir Edward Grey.

We may thank God for this, while we ask Him to give us, as a nation, courage and steadfastness.

It may be that from the horror of this conflict such a true and general desire for peace will spring that with it wars may end.

If it is right, there is no other way,
Brave words to speak, and braver still to live;
A flag to guide the battle of each day,
A motto that will peace and courage give.

If it is right, there is no other way:
This is the voice of God, the call of truth;
Happy the man who hears it to obey,
And follows, upward, onward, from his youth.

—Selected.

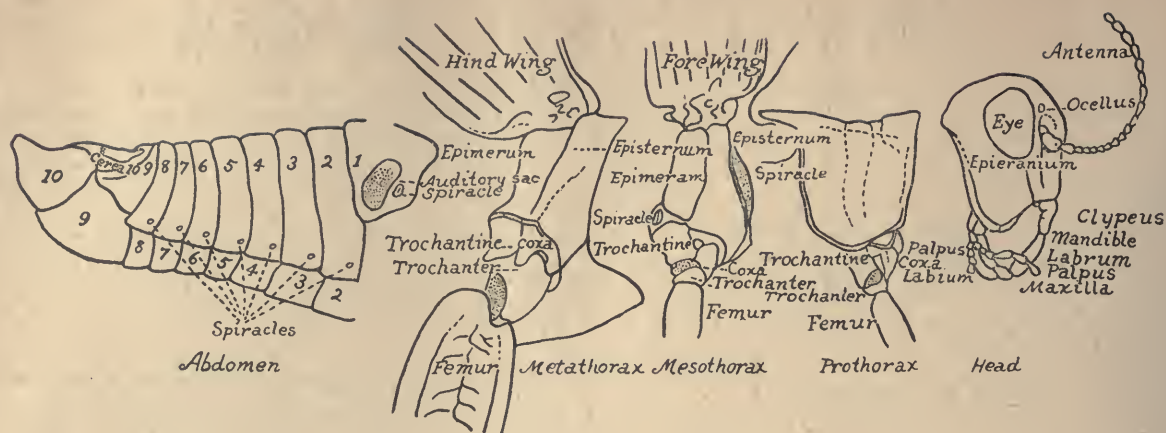


FIG. 1. Side View of a Grasshopper (Locust) with Thorax separated from the Head and Abdomen, and divided into three segments

NATURE STUDY OF ANIMALS.

H. G. PERRY.

Collect grass-hoppers from fields and pastures and kill in a cyanide bottle or in a chloroform jar.

First notice that the grass-hopper is symmetrical about its long axis, i. e. the right and left sides of the body are alike. Are the dorsal and ventral sides alike?

As shown in Fig. 1 the body is divisible into three parts; head, thorax or chest, and abdomen. Find these parts in your specimen, and note further that the abdomen is made up of a number of rings or segments, called somites.

Many forms in the branch or phylum of animals to which the grass-hopper belongs, the joint-legged animals, have a pair of appendages for every somite; the grass-hopper and other insects, however, are the exception, as their abdominal somites are free from appendages. While a somite may or may not have a pair of appendages, every pair of appendages represents a somite. Thus the thorax shows three pairs of legs, so we conclude that it is made up of three somites. These are shown separated from one another in Fig. 1.

Note the use of these legs, which are especially fitted for hopping?

How many pairs of wings has the grass-hopper? To which part, and to what particular segments are they attached?

Note that the two pairs differ somewhat in texture. How do they differ in use? When not flying the hind wings are folded up like a fan. Spread out one and note its shape, size, and veining. Compare it with the front wing. Compare the veining of these wings with that in the wing of the dragon fly.

The head seems to be one solid piece, in itself having little or no indication of somites, but the appendages, mouth parts and feelers, tell a different story. Note the mouth parts as given in Fig. 2, and find them in your specimen.

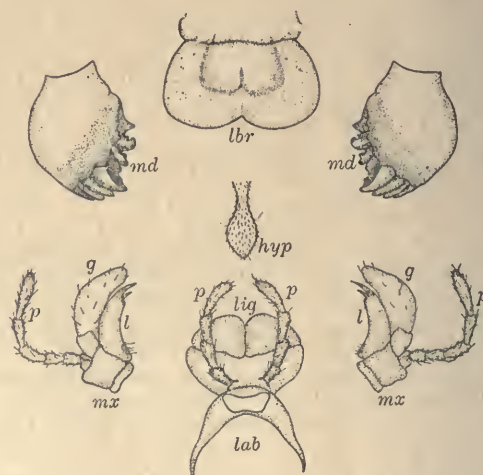


FIG. 2. Mouth-parts of a Grasshopper. lbr, Upper Lip (Labrum); md, Jaws (Mandibles); lab, Lower Lip (Labium); p, palpus; g, Galea; l, Lacinia; lig, Liguler; hyp, Tongue (Hypopharynx).

The jaws are tooth-like pieces for biting, and move in a transverse plane. Compare this movement with the movement in the jaws of the cat or dog. The underjaws aid the jaws in mastication. That portion called the palpus resembles a small antenna, and like it is sensory.

The underlip is made up of two parts grown together in a median line. Note that the palpi of the underlips are similar in form and function to those of the under-jaws.

The tongue is in the mouth cavity, and is soft and fleshy in grass-hoppers.

The antennae or feelers project from the front

and upper part of the head. Their common name indicates their principal function as sense organs. Note their composition; they seem to be made up of bead-like parts.

The large compound eyes are just back and before the feelers. Examine with a lens. From Fig. 3. locate on your specimen the front ocellus, Fig. 1. shows the position of the other (lateral) ocelli. These are the single eyes. The eyes are not considered appendages, hence do not represent somites. Count the number of somites found in the head, thorax and abdomen. Later it will be interesting to compare this number with that found in other jointed-legged animals, as the lobster, crayfish, etc.

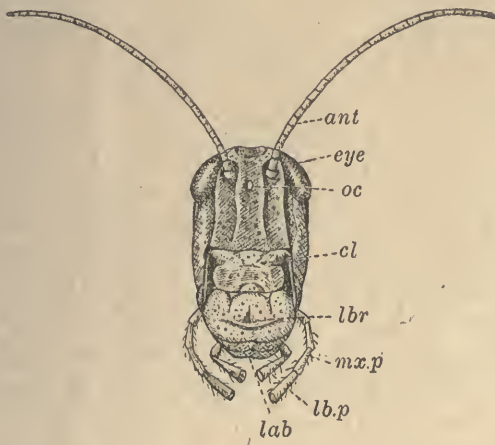


FIG. 3. Face of a Grasshopper. Ant, Antennae or Feelers; eye, Compound Eye; oc, Ocellus; cl, Clypeus; lbr, Upper Lip; mx.p, Under Jaw Palpus; lb.p, Lower Lip Palpus.

The digestive tract, or alimentary canal, consists of a fairly straight tube occupying the larger part of the centre of the body, and divided into parts with special functions.

The food after being ground up by the mouth parts is carried into the mouth, and there acted upon by the saliva. Note the position of the salivary glands, and their ducts. The duct has its opening near the base of the tongue.

The esophagus is a straight tube leading from the mouth to the crop. Compare it with the esophagus in man. Also compare it with the esophagus of the chick, with its similar associated parts, crop and gizzard. In fact the gizzard or proventriculus was so named from its resemblance in structure and function to the gizzard of birds. Procure the gizzard of a fowl and give a lesson on it. Its strong thick muscular walls will at once suggest its work, and the small stones inside will help to make plain how it grinds the food.

The stomach or ventriculus is beyond the gizzard and is usually a simple tube. When the food passes into the stomach it is acted upon by the secretions of the gastric caeca, whose tubes open into the anterior end of the stomach. The lining of the stomach is glandular and its secretions aid in digestion, but its chief function is to absorb the digested food and pass it into the circulation.

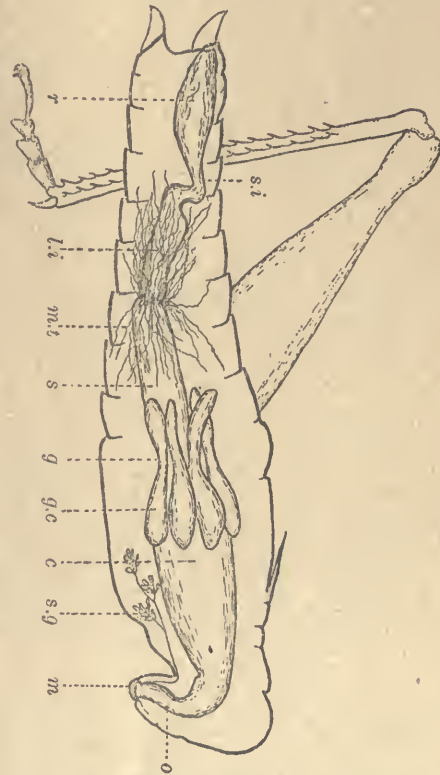


FIG. 4. Digestive and Excretory System of a Grasshopper. C, Crop; g, Gizzard or Proventriculus concealed by Caeca; g.c, Gastric Caeca; l.i, Large Intestines; m, Mouth; m.t, Malpighian Tubes or Kidney Tubes; o, Esophagus; r, Rectum; s, Stomach; s.g, Salivary Glands; s.i, Small Intestines.

Beyond the stomach is the intestine, with its distinct parts: large intestine, small intestine, and rectum. Compare the whole digestive tube with that of man. This work will also serve as standard for similar work in other insect forms.

The malpighian tubes open into the intestine just posterior to the stomach. They are excretory organs and similar in function to the kidneys of higher animals.

So far we have used the name "grass-hopper" in its popular sense, in which it includes both grasshoppers and locusts. The length of the antennae is a good distinguishing feature between these two groups. If they are as long or longer than the body the form belongs among the true grass-hoppers; if

shorter, usually not more than half the length of the body, they are locusts. Examine your collection, and accordingly divide them into two groups. Which are more numerous in your locality?

Insects are characterised by a distinct head, thorax and abdomen, with three pairs of walking legs, and usually with two pairs of wings. Examine and determine which of the following animals are insects;—toad, mouse, housefly, clam, starfish, lobster, dragon fly, potato beetle, butterfly and spider. Substitutions may be made, and the list extended for school work.

The wings of birds and insects should be compared as to form, structure and function. Are they homologous or analogous parts?

The hard parts of bodies of insects are on the side and so form an exoskeleton. This is a condition we find exactly reversed in many animals, where the hard part or frame work is an internal skeleton.

Test the hard part of the clam or oyster with hydrochloric acid. We find it is composed largely of carbonate of lime. In the same way test the dried exoskeleton of the sea urchin, starfish, and the shells of lobsters, crabs, snails, and several kinds of insects. The exoskeleton of insects is composed chiefly of chitin, and does not react to HCl.

Some of the locusts are gregarious and at times are very destructive, as they are herbivorous and feed upon almost any green part of plants. The Rocky Mountain locusts have at various times migrated eastward from their mountain homes in countless millions, and devastated various parts of Western Canada and the United States.

The locusts of the Old World are likewise frequently very destructive. The prophet Joel in the first nine verses of chapter 2, gives a very vivid description of the flight of a plague of locusts. Read other accounts of their devastations, and be sure to gather all local data available.

Has the locusts any enemies? Here is a chance for original work. It is quite safe to infer that if the locusts had no enemies they would soon become destructive pests in our own country. It is only through patient investigation that we may come to know something of the great debt we owe to birds and other animals of our woods and fields.

Copied from "Elementary Entomology," Saunderson and Jackson, through the kindness of the publishers, Messrs. Ginn & Co., Boston.

LOWLAND FERNS

J. VROOM.

An early start this morning, and a westerly route, if we are out walking for pleasure.

Why is it that idle footsteps always turn toward the west? In the morning, we let our shadows point the way that we shall take, if we have no definite object to lead us in another direction; in the evening we leave the shadows behind. Perhaps there is a natural instinct bidding us follow the course of the sun. We are all sun worshippers by nature.

So, after our greetings to the king of the day, we will turn our backs to his brightness and look to the westward, where each drop of dew reflects his glories in miniature so as to bring them within the range of our weak vision. Low lying fields, all their feathery grasses grey with beads of moisture, are iridescent in the morning light. As the sun rises higher, the greys and purples disappear, and vegetation is seen in its true colours. The greens and browns are richer now than at mid-day, for the lurking shadows bring them out more clearly; and the air itself has a colour which belongs only to the morning hours.

We are out again in search of ferns; and when the grasses along the roadside are dry it is time to take to the fields. Leaving the dusty road where it crosses the brook, we go up the meadows, of course; for there is another instinct which leads us up stream rather than down. And here we shall find all three of the Flowering Ferns. They differ from true ferns in having green spores which mature as the fronds unroll in early spring; but, though their fruiting season is past, and only the withered remnants of the fertile parts remain, they can still be easily recognized.

In the wettest places we shall expect to find the Royal Fern. This is the Flowering Fern proper, in distinction from the others of the group; and is so called because of the spore-bearing panicle at the summit of the fertile fronds, which looks like an inflorescence. The fronds, from two to five feet high, are pale green, smooth and delicate. They are bipinnate, the primary divisions distant and opposite, the secondary divisions alternate. If the fertile portion is not still remaining in a brown cluster at the top of the frond, the fern can be recognized by its oblong leaf-like divisions and its shining stalks.

The Cinnamon Fern is found in drier situations; and is so called from the colour of the dense, narrow fertile frond which was borne in the centre of the crown of sterile fronds but has now disappeared. The sterile fronds are pinnate, each division deeply cut into oblong lobes, and they may be known by the tufts of brown wool which are usually found on the under side.

The third of this group is the Interrupted Fern. It prefers a shady place, where it frequently rises to a height of five or six feet. Its sterile fronds resemble those of the Cinnamon Fern in shape; but the lobes are rounder, especially those at the summit of the frond. The fertile fronds are much like the sterile, though taller; and show the characteristic interruption near the middle, where possibly the withered remains of the few pairs of fertile pinnae may still adhere.

If an oak tree stands at the margin of the stream, like the oak of Sumner-chace, "hidden to the knees in fern," the ferns which surround it are either the Interrupted Fern or the Ostrich Fern or both. The Ostrich Fern somewhat excels the other in height; its sterile fronds are more strictly upright in growth, and are narrowed toward the base; and its stalk is deeply channelled. The channelled stalk and narrow base will serve to distinguish it from the Cinnamon Fern, for which small specimens might be mistaken. The fertile fronds are often wanting. When present, they are found in the centre of the circle, and are short, with thick, pod-like divisions in which the fruit dots are hidden. This fern is quite abundant in some parts of New Brunswick, though not common in Nova Scotia.

The Sensitive Fern is closely related to the Ostrich Fern, though very different in appearance. We are sure to find it in moist meadows and thickets, where its creeping rootstocks lie upon the surface of the ground. The scattered sterile fronds are long-stalked, few-lobed, and almost triangular in outline. The fertile fronds remain unexpanded, like those of the Ostrich Fern; and, like the latter, they persist through the winter. The sterile fronds of this fern, though coarse looking, are very sensitive to frost, which may account for the name.

Here, too, we may find the delicate Marsh Shield Fern, or Meadow Fern. Its long-stalked fronds, about two feet high, rise from a slender rootstock. It somewhat resembles the Lady Fern

in size and shape, and shares with it the name of Female Fern; but its fruit dots, instead of being long and narrow as in the Lady Fern, are small and round, and the margin of the fertile fronds is strongly reflexed.

In low woods along the brook we shall look for the New York Fern; which is even more delicate and graceful than the Marsh Shield Fern. Its fronds taper both ways from the middle. They are from one to two feet tall, are comparatively pale in colour, and are hairy along the veins beneath; and the ground fruit dots are near the margin, which is not revolute. A single plant of this fern is worth finding; and when a large unbroken bed of it is seen in deep woods it is extremely beautiful.

When we find a good swamp — goodness in swamps is a negative quality — we shall probably see there the Crested Shield Fern. It has a stout, chaffy rootstock, by which it can be most easily distinguished from the Marsh Shield Fern. Other points of distinction are that the fronds are of finer texture, their segments are more triangular in outline, the fruit dots are not so near the margin, and the margin is not revolute. It can hardly be mistaken in the fields for the Spinulose Shield Fern, as the latter grows in upland woods. The sterile fronds of both are evergreen.

(To be concluded next month.)

From the Director of Rural Schools in Nova Scotia comes this story, with its moral. A young teacher, fresh from one of the Summer Schools, and full of enthusiasm, planned a Nature Study lesson as part of her first day's programme in a new school. She sent some children out to bring in fall dandelions and distribute them. The pupils, to whom such work was unknown, took it as a huge joke, pulled the flowers to pieces, and threw them about the room. The lesson was a failure. *Moral* Keep to familiar subjects and beaten tracks until you have got your pupils well in hand.

EXAMPLE.

We must set a good example to the children; but the best way to ensure that is to set them the example of somebody better than themselves.—*Stephen Paget*.

Children have more need of models than of critics.
—*Quobert*.

CENTENNIAL ANNIVERSARIES OF THE WAR OF 1812.

J. VROOM.

XXIV.—The Battle of Bladensburg and Capture of Washington — The Capture of Alexandria — The Last Engagement on the Great Lakes — The Plattsburg Expedition.

August 24.—The British military operations along the shores of Chesapeake Bay in the summer of 1814 came not without warning. After the burning of St. David's, in July of that year, the commander of the fleet, Admiral Cochrane, formally notified the United States Government that he had been called upon by the Governor-General of Canada to retaliate against the inhabitants of the United States for the wanton destruction committed by their army in Upper Canada; and that it was his duty to issue to the naval forces under his command an order to destroy and lay waste such towns and districts upon the coast as might be found assailable.

To assist in these measures, and for a more definite purpose, transport ships brought from Bermuda an army of four thousand five hundred men commanded by General Ross, an officer who had served with distinction under Moore and Wellington in the Peninsular War. Landing on the twentieth of August on the bank of the Patuxent, at a place called Benedict, about fifty miles south-east of Washington, Ross led his army across the intervening country to Bladensburg. Bladensburg is situated on the Potomac, a few miles above the capital. The army which met him there was larger than his own; but it was chiefly composed of raw militia, and was easily put to flight.

The battle of Bladensburg took place on the twenty-fourth of August. About eight o'clock in the evening of the same day, the British occupied the city of Washington without further hindrance. President Madison and the members of his cabinet had fled when they found that the battle was going against them.

No private property was destroyed by the British soldiers in Washington, excepting two houses from which shots were fired; but they burned nearly all the public buildings, including the Capitol, the President's house, and the building which contained the war office and the treasury. The navy yard and two ships lying

near it had been abandoned and set on fire, destroying a large quantity of ammunition and stores of every description. Next day the British took possession of the navy yard, and completed the work of burning the stores and arsenals.

On the evening of the twenty-fifth, having accomplished his mission, General Ross evacuated Washington and began his retreat to Benedict; where he embarked his forces on the thirtieth, ten days after their landing.

In the British Parliament, as well as elsewhere, there were many to censure the government for this remorseless deed of vengeance. The ministry, however, fully accepted the responsibility, and justified the work of destruction as an act of reprisal for the burning of the government buildings at York. Lucas, the historian, devotes several pages to a discussion of this question; which he ends by saying that York, though a small town, was the capital of a British colony, and the wrongs of the colonies should be requited upon the wrongdoers, not less, but more than if they had been inflicted upon the mother land herself.

General Ross did not live to hear the British Government blamed for the work of his punitive expedition; nor to receive the praise that was due him for his scrupulous respect for private property. To record his name and fame, a monument was erected in St. Paul's Cathedral, London, by unanimous vote of Parliament. Let the inscription tell the rest of the story:

"Erected at the public expense to the memory of Major-General Robert Ross; who, having undertaken and executed an enterprise against the city of Washington, Capital of the United States of America, which was crowned with complete success, was killed shortly afterwards, while directing a successful attack upon a superior force, near the city of Baltimore, on the 12th day of September, 1814."

His grave in Halifax, Nova Scotia, is marked by a stone with a lengthy inscription; which tells us that there is a more elaborate monument to his memory at his home in Ireland.

August 29.—While General Ross's army was retiring from Washington by way of the Patuxent another expedition was ascending the Potomac to take the town of Alexandria and hold it for ransom. The place was reached on the evening

of the twenty-eighth, and was captured on the following day. The town was spared on condition of all public property being given up; and the expedition got back to Chesapeake Bay with very little loss.

September 6.—The last naval conflict on the Great Lakes was comparatively unimportant, and is worth mentioning only because it was the last.

Of the five vessels that had unsuccessfully attacked Michilimackinac in August, only three returned to Detroit. The other two remained to blockade the place; or, rather, to blockade the mouth of the Nottawasaga and interrupt communication by that route. They were near St. Joseph Island on the night of the third of September, and about five leagues apart, when one of them, the "Tigress," was attacked by boats from Michilimackinac, which had silently approached her in the darkness, and was quickly boarded and captured. The crew of the other vessel, the "Scorpion," knew nothing of this occurrence until the two vessels met on the morning of the sixth. Then, on coming to close quarters, they were surprised to see the "Tigress" display the British flag and make ready for battle. The battle was brief, for the "Scorpion" surrendered when the first shots swept her deck. So the Nottawasaga route was effectually cleared by the capture of both the vessels.

September 11.—Sir George Prevost, at the beginning of the war, had willingly followed instructions from England to refrain from aggressive measures. Now, when the orders were to take the offensive, he prepared to lead an army against Plattsburg. He had over ten thousand men, most of them troops sent from England that had seen service under Wellington. The time was well chosen: General Izard, who succeeded Wilkinson in command at Plattsburg, had gone to take part in the Niagara campaign, and had taken with him a portion of his army. Only four thousand were ready to defend the place, and the greater part of these were militiamen hastily summoned to meet the British invasion.

Though Prevost wished to hasten his movements, his advance was slow. He crossed the boundary line on the first of September; and when at length he reached Plattsburg, five days

later, instead of beginning the attack immediately he waited for a flotilla which was to come down the Richelieu under Captain Downie. Downie's movements were delayed because his largest ship was newly built and not yet ready to sail.

The new ship having been hastily finished, on the morning of the eleventh the squadron appeared. It was opposed by a fleet of equal strength, which had the advantage of a safe position under the guns of the fort. In the sharp naval battle which ensued, the British squadron was defeated, and Captain Downie was killed in action. Prevost had for some reason delayed his attack upon the batteries, which was to have begun as soon as the ships arrived; and this delay may help to account for Downie's defeat. The defeat, Prevost thought, made it hopeless for him to attempt to capture and hold the fort, and therefore he ordered a retreat. Because of this deplorable failure, he was summoned to England to be tried by court martial; but he died before the day appointed for the trial, and how far he really was to blame for the disaster is still a matter of dispute.

BIBLE READINGS FOR OPENING EXERCISES

1. St. Mark XII, 28-31.
2. Jeremiah XXIX, 11-13.
3. Psalm XXXIII, 1, 4-8, 11, 12.
4. St. Luke XVIII, 35-43.
5. 1 Corinthians XIII, 1-7.
6. Psalm C.
7. St. Matthew V, 43-48.
8. Proverbs III, 1-7.
9. St. Mark IV, 35-41.
10. Ephesians IV, 31-32.
11. St. Matthew XXV, 31-40.
12. Psalm CVII, 1-8.
13. St. Mark III, 31-35.
14. Micah VI, 6-8.
15. Isaiah XII, 1-5.
16. St. Luke VII, 11-16.
17. Psalm XV.
18. Proverbs II, 1-6.
19. St. Mark X, 13-16.
20. St. John IV, 46-53.
21. St. Mark XIV, 3-9.
22. Psalm XXIV, 1-5.

HIGH SCHOOL LITERATURE.

THE LAY OF THE LAST MINSTREL.

Sir Walter Scott is one of the great heroes of literature. Every one should know not only his books, but himself, for he is greater even than his work. The facts of his life will be found in whatever edition of the poem is used, but they should be enlivened from the teacher's fuller knowledge. Lockhart's "Life," one of the greatest biographies in the language, is to be had in Everyman's Library, and should be thoroughly known. The attention of the student should be drawn to such points as these:—Scott's childish love of stories, out of door life, games, and fighting; his wonderful memory, his industry, his ambitions; his love of his own country and district, and familiarity with its history and legends; his friendships; love for horses and dogs and of field sports; his untiring kindness, courtesy and generosity; his story-writing, first in poetry, then in prose; the interest in and mystery about the Waverley Novels; the high honour, courage and consideration for others with which he met his troubles and the disappointment of all his hopes. Compare the patient and loving endurance of a life-long sorrow and renunciation in Charles Lamb with Sir Walter's gallant bearing under staggering blows late in life. "Both alike stand high among those who have been able to display

'One equal temper of heroic hearts,
Made weak by time and fate, but strong in will,
To strive, to seek, to find, but not to yield.'

It is the simple, straightforward acceptance of hard, humble, everyday duty that makes heroes of them both.

Teach some of Scott's characteristic sayings:—
"Never let me hear that brave blood has been shed in vain."
"If I did not see the heather at least once a year, *I think I should die.*"

And his dying words to Lockhart,

"My dear, be a good man,—be virtuous — be religious — be a good man. Nothing else will give you any comfort when you come to lie here."

SUGGESTIONS FOR TEACHING THE POEM.

Vary your methods to suit your class. Do not confine yourself to one way of approach, but try to find those that lead to individual interest. Remember that your aim is to help your pupils to read with understanding and with pleasure, and that most of them need a good

deal of help at first. Consult the notes on "As You Like It" in the REVIEW for September, 1912, for a general plan.

The "Introduction" is a charming setting or framework for the story. (Cf. the setting of the "Canterbury Tales"; Longfellow's "Tales of a Wayside Inn" and other tales). It should be thoroughly studied. Points to be grasped are:—the time; the place; the figure of the old harper, (find William Pitt's comment on this in Scott's "Life"); the character of the Duchess; the succession of pictures. The lines at the end of each canto should be studied in the same way, as you come to them. Dull children, unused to reading, need to be guarded from confusing the setting with the story itself.

THE STORY.—Note the description of the conditions at Branksome Hall and how they prepare us for a story of strife. Tell the pupils that the opening of a story usually gives us the time, place, most important characters, and some idea of what kind of story it is to be. If it is a story of difficulties or struggles of any sort, then we generally find out from the beginning what those struggles are to be about. Your class may be able to illustrate this from some story they have read. This story begins with the death of Lord Walter, and this is an historical fact and took place in 1552. That fixes the date. The complications of the story are indicated in the lines,

"And if I live to be a man
My father's death revenged shall be."
"her mother dread,
Before Lord Cranstoun she should wed,
Would see her on her dying bed."

and in the account of the magical powers possessed by the Ladye. A further complication comes in later, in the episode of the Goblin Page, but this is not well worked out, and is rather confusing. Mr. Hutton says, "I venture to say that no reader of the poem ever has distinctly understood what the goblin page did or did not do, what it was that was "lost" throughout the poem, and "found" at its conclusion, what was his object in personating the young heir, and whether or not that object was answered." With this exception the tale is clear enough. But the story of the feud and of the loves of Margaret and Cranstoun ends with Canto V, and Canto VI is really an epilogue in which we get rid of the goblin page and of the magical

element. The class should be expected to summarize the events of each canto, and at the end of Canto V, the whole story, summarizing Canto VI separately.

CHARACTERS.—Not much time need be spent in character study. William of Deloraine is very real and his characteristics as a typical Borderer should be clearly grasped. Watt Tinlinn is a vivid sketch. Daore and Howard are well shown in contrast. Short character studies might be made of these, and of the Ladye, orally first, then in writing.

METRE.—The Lay gives an admirable opportunity for the study of varied metre, and of metre varied not merely to escape monotony, but to suit the subject. Note the rush and hurry of the verse at the beginning of Canto I, and the steady sweep in William of Deloraine's ride. Note the variety gained by shifting the accent, and by different arrangement of rhymes. Compare the metre used in the introduction with those of the story and the ballad metres. A great deal can be done to train the ear by a little study at this stage. Probably early in the day, a pupil with no ear for rhythm will read a line omitting or interpolating a syllable, or giving a wrong accent. This should be taken as a starting point. Try to get the line correctly read. Put it, with others, on the board, and have the pupils put in the accents. Set them to find similar and dissimilar lines. You will find a wide field for study, and great interest. Do not attempt to teach technical terms for feet or lines.

ILLUSTRATION FROM OTHER BOOKS OR POEMS.

This is an important part of literature teaching. It is a great step when a student learns to "make one book talk to another." Very little can be done with beginners, as they have no material. The teacher may, however, add interest to the lesson by *judicious* quoting or reading from his own store. Scott and Wordsworth may be drawn upon in this case. *e. g.* The tournament in "Ivanhoe," the scene before the battle in "Marmion," many loving descriptions of Scottish scenery, the expressions of patriotism, Bertram's journeyings in the Borders with Dandie Dinmont:—These are but a few of the passages in Scott's novels and poems that

will illustrate parts of the "Lay." The poems on Yarrow in the "Golden Treasury," and Wordsworth's "Loss of Friends" should be read by the teacher at least.

SOME MISCELLANEOUS QUESTIONS.

Introduction. Get a clear picture from the first 6 lines. Draw it, if you can draw. Explain lines 3-4. Line 11, "neglected and oppressed;" how, and by whom? Cf. 15-26. From ll. (a) 13-14, (b) 15-18, (c) 23-24, (d) 25-26, write, in your own words, short descriptions of the Minstrel in different situations. Line 20, "a stranger;" who? What other lines fix the time in which the Minstrel lived? Why "iron time?"

"Where Newark's stately tower." Where is this? How near to Scott's home? Does he write as one familiar with this region? "Birchen bower" cf. Canto IV, l. 128. What other trees are named in the poem?

Characterize the Duchess with two or three adjectives of your own. Write in direct discourse the substance of the Minstrel's speeches in ll. 49-59, and 75-83. Does he speak anywhere in direct speech? Express in your own words ll. 66-67; 95-96; 97-98. Give synonyms for wishful, unpremeditated, mien, reverend, anon, security, fain, according, *as used here*. What is the subject of "closed" in line 35? Find other examples of inversion. Explain the use of the adjective in "bloody tomb," "cold diffidence." "Rolled back the tide of war;" express this literally. Why does the poet say it figuratively? Do we use figures of speech in ordinary conversation? If so, why do we use them? How many syllables has each line of the introduction? How many accents? Is the same metre used in all the lines that tell about the Minstrel?

Canto I.—Read the first five stanzas aloud; turn back to the introduction and note the phrases "varying cadence," "measure wild," "the full tide of song." Do they describe the *sound* of what you have just read? Try to bring out in your reading the sweep and rush of the verse. Does it suit the subject? Note how verse 6 suggests the nature of the story and cf. l. 8, introduction. Where was "the Border?" [A map is essential. If the book used in class does not contain one, a map should be outlined on the board and the places named

[For the REVIEW.]

in the poem put in]. "Lord Walter" in verse 7, was great-grandfather of "Earl Walter" in the introduction. Note that Scott is writing a story of his own clan. How did the Minstrel know the facts? How should we learn such facts? Note three different elements of the story introduced in verses (a) 6 and 7, (b) 10, (c) 12. Name any other stories that turn on feuds, revenge, thwarted love, magical powers. How could the Ladye understand the conversation in verses 15-17? "Till pride be quelled and love be free." How are these words echoed in Canto V? Is "Arthur's Wain" ever called by another name? Quote any mention in poetry of the constellations named in verse 17. On what day of the year did William of Deloraine ride to Melrose? What is the only thing that made the Ladye forget her purpose for a moment? "Letter nor line know I never a one." Who said "thanks to Saint Bothan, son of mine, save Gawain, ne'er could pen a line?" Collect the passages telling of sounds, *e. g.* "the blood-hound baying," "the tinkling rill." How does the poet measure the time that it took to ride from Branksome to Melrose? In what two senses is the word "wight" used. How do you pronounce Dunedin? What word rhymes with it? Teviot is pronounced "Tiviot;" Hawick, Haw-ick (*not* Haw-wick); Eildon, eildon.

In these suggestions I have purposely ignored many points that will be dealt with in any annotated edition. The teacher is advised to read Lockhart's "Life of Scott," R. H. Hutton's "Scott" in *English Men of Letters* (Harper's, 75 cents,) and the article on Scott in Mrs. Oliphant's "A Century of Great Poets." Questions on the remaining cantos will be given in September. Dickens' "Christmas Carol" will be discussed next.]

I.—THE PEPPER BOX.

Baby found a little box—
True, it wasn't lost
(Baby, later, found that out,
Much to baby's cost).
Full of little holes the top,
Baby shook it well;
What it was that sprinkled out
P'r'aps I needn't tell.
Baby's far too young to talk,
All the same it's true,
Plain as plain, a hundred times,
Baby said "atchew!"

Get knowledge and get courage. And when you have come to a deliberate decision, then go ahead, and go ahead with grim and unshakable resolution to persist.

—Lord Haldane.

THE FIRST DAY IN A FIRST GRADE SCHOOL

ONE TEACHER'S PLAN FOR THE WORK.

On the first day school really opens with the arrival of the teacher. Many mothers as well as fathers being bread-winners, the parents bring the little ones to school on their way to work, and receive immediate attention; the older children who have brought new pupils patiently waiting their turn, as they will not be marked late if they do not reach their respective rooms before nine o'clock.

Seated at her desk, the teacher scans each permit, scribbles the pupil's name on slate and primer if he has them, jots on a slip of paper the item about this boy whose arm is still sore from vaccination, that girl who will bring her permit in the afternoon, the boy whose permit is here, but he will not arrive in person until to-morrow, the little girl who does not know her way home and must be kept until called for, the boy who is "hard of hearing," and the one who must sit beside his chum until he gets over "being strange"—otherwise he will cry!

Finally, slates and primers are in their respective piles on the side table, pencils in the big box provided for them,—for there must be nothing *in* the desks, and nothing *on* the desks except an apple or the little package of lunch to be eaten at recess,—the last parent, big sister, and small brother have departed carrying "the slips" with them, and the first Grade teacher is face to face with her year's work.

The "slip" is a small bit of paper on which is written:

Slate—eleven inches long inside the frame, bound with red felt.

First Primer.

Long sharp slate pencil.

Two slate cloths.

Hours 9 a. m. to 12 a. m., 1.30 p. m. to 2.30 p. m.

Must not be late.

A few slips may call for twelve inch slates for unusually large children.

One slip is given to each parent. This device saves much time and many words, as well as making sure of uniform material, and preparing the way for the changing of slates already bought, but which are quite unsuitable.

First on the programme is the talk about

sitting position, and standing position. Quite a few minutes can be spent on this drill, each order, "stand," "seats," being prefaced by the long-drawn out word "Class," in the regulation singing tone of the drill-sergeant.

Next, the names are called from the permits,—a fussy bit of business, as some children will not answer "Present." Sometimes this first roll-call must be repeated, the children being asked to stand, and as each answers to his name, to sit down;—thus the last year's pupil who slipped in unnoticed, and the new one who came by himself are discovered, so that, with these exceptions, the number of children and the number of permits tally.

The third step is the teaching of a short and simple text. The verse "I will behave myself wisely in a perfect way" is easily learned and suggestive. The Lord's Prayer is repeated; then follows the first verse and melody of a simple hymn.

A second drill in sitting and standing positions will exercise the children sufficiently to admit of a short number lesson. Each child in the first row will stand in proper standing position and try to count up to ten as the teacher touches the balls of the ball-frame. Possibly two rows may count before the pupils get so restless that a change of work is necessary.

Perhaps now the children in one or two rows could be sized and seated; and a list made. Through the morning, the remainder of the children have their turn at counting. As the opportunity arises the other rows can be sized and seated. The teacher now has all the names on a long narrow paper which she carries about with her, referring to it for a name when a question is to be answered,—a great help in fitting names to pupils.

It is most necessary to take plenty of time to prepare for recess. Probably quite fifteen minutes will be required to accomplish the dismissal in something approaching an orderly manner.

After recess the children will not be able to find their own desks, so that invaluable list of names enables the teacher to seat as many children as were given places.

When the hymn or little song has been practised, memories refreshed in the matter of sitting and standing positions, the teacher, in silence,

performs some simple arm and finger movements. Many observant children imitate these movements, while the inattentive ones soon feel the silence and realize that something new is happening.

In these early days, that strange creature, the teacher, should be the centre of interest,—and if that centre can be sufficiently interesting, the children will not turn their attention to pockets, playthings, etc. The last movement in the exercise calls for folded arms on the desk. Then the teacher suggests, very quietly, that heads be laid on the arms (indicating the direction which will turn the faces from the windows), with eyes closed.

The children remain in this position as long as possible. Any restlessness or inclination to laugh is the signal for the teacher to close this period of rest by the *very* quietly spoken word "Position."

This exercise forms a natural introduction to a lesson on the sense of hearing. If the rest period was too short for any variety of sounds — if no bird sang, or dog barked, no car clanged, engine whistled, or person walked overhead,—then the children may close their eyes as they sit, and listen with intent to hear.

In summing up the lesson, the teacher lays great emphasis on the fact that we can learn so much by hearing, and do not need *always* "to turn round to look."

A good march around the room may be desirable now, and if, with marching in view, the teacher has chosen a hymn or song with the proper rhythm, singing will add greatly to the pleasure of marching.

After marching is over, another lesson in counting may be given, or another row of pupils may be placed properly.

A drill in raising right and left hands, pointing left, right, front, back, forms an introduction for the next lesson—the placing of squares on the desk,—the initial step to future pattern making and paper folding.

It is quite possible that there may not be time for even this much work, in the morning, for there will probably be many interruptions; but it is wise to *plan* plenty of changes, so as to keep the work moving. A long pause or hesitation on the part of the teacher, means loss of attention and lack of order on the part of the children.

If more work is needed to fill up the minutes before preparation for dismissal, there will always be some interesting object at hand or picture on the wall about which much may be said by children and teacher.

Again the teacher must remember to allow ample time for closing.

In the afternoon, after roll-call, singing, and some arm movements, the teacher, passing quickly down the aisles, examines each pair of hands, showing the children how to open the palms, then to turn the backs of the hands, so that knuckles and nails may be inspected.

A pleasant word of commendation for the spotlessly clean hands and nails will bear good fruit next morning. This inspection is part of the opening exercises of every session throughout the year, and the sooner it is begun, the better the results.

The hour in the afternoon is really filled in gathering up the threads of the morning work,—making sure that each child has counted those fascinating balls, that each one is seated according to size, and that the names are entered on the list in that order.

Through the afternoon, there will be marching and arm movements, ending with the rest period, as in the morning. There may be time for a rapid sketch on the black-board of a tree, perhaps, a talk about trees, and the word "tree" placed on the black-board, so that the children may feel that they have had their first lesson in reading. This, however, cannot always be accomplished.

The children are bidden "good afternoon," to which they are taught to respond; and the first day of school is over.

One of the items in preparing for the work of the following day, is the writing of each pupil's name on a slip of paper which is pasted (with a little flour and water) on the upper left-hand corner of each desk, enabling the teacher to show each child his own seat. These slips are also a great aid in learning the names of the children.

If one teacher gains one idea from this account of a first day's work, then the writer's time has not been spent in vain.

FAITH THE MAINSPRING.

When you lose faith in yourself your mainspring has run down—the rest of the works are useless.—*Herbert Kaufman.*

For the REVIEW]

THE FIRST DAY IN THE UNGRADED COUNTRY SCHOOL.

They were teachers, and had been spending a part of the month of August in the country—the salt air country. Said one, "Do you see the little tinge of red on the trees? And oh, the goldenrod, isn't it all too beautiful!" "Yes," said the other, with the faintest suspicion of a sigh, "but somehow I can't help associating the goldenrod and that first tinge of red with the back-to-school-again thought."

I am afraid we teachers must all plead more or less guilty to this same association of ideas; and alas! even now there appears that "first tinge of red" in the forest.

Some of us are going back to our old schools or to somewhat similar positions, and have a fairly clear idea of what awaits us. But what of the three or four hundred new teachers with their mettle untried, going out in a week or two to their first schools? The beginning of the Fall Term is fraught with special significance to them; and it is to those teachers, particularly the ones who find themselves about to take up the work of the ungraded country school, that the writer of this article would like, if possible, to bring a suggestion or two which might prove practical and helpful.

One asset they all have—the supreme optimism or youth—and an invaluable asset it is. This, coupled with the knowledge that first days in any untried work must of necessity be hard days is going to carry them safely over many difficult places.

But the first day! Just to get that successfully over seems to be in itself an achievement.

Possibly I am wrong, but it seems to me a distinct advantage *not* to have talked over the difficulties of a school with an outsider. It isn't going to help you, the new teacher, to know that little Willie Green is a "perfect terror" and that your predecessors have found little Willie's mother anything but a "wise, firm and judicious parent." Far better to find out little Willie's short-comings and those of his maternal parent, from your own observation. For you, these short-comings may not exist.

My first advice, then, to the young teacher would be to go to a new school, if possible, with a mind free from prejudice, and not to expect

trouble from any quarter, until symptoms of that trouble appear.

On that first morning, when you are confronted by twenty-five or thirty restless, sunbrowned hopefuls of assorted sizes, fresh from a two-months' vacation, it will be no wonder if for a moment you hesitate as to just where to begin. But it doesn't do to hesitate. The work of appraising on the part of the occupants of the desks has already begun. They are even now "taking your measure," and in this case the old saying is very apt to be true: "He who hesitates is lost."

The matter of seating has been taken out of your hands for the time being, for with the ringing of the bell, the pupils will have seated themselves. Some will have taken the seats which they occupied last term; others have hastily preempted the ones which they have always coveted but have never been allowed to occupy. It will be wise to let this pass for the present, only seeing that the little ones are properly seated, and making changes that are obviously necessary.

There will always be pupils to whom satisfactory seats can not be assigned — satisfactory, I mean, to the teacher — without knowing something of their proclivities. Let the pupils understand that the present arrangements are only temporary, and endeavor to find out something about them as individuals before finally assigning their seats. In the cases of some pupils environment and propinquity — to the teacher — are everything. In the matter of seating, it is also important to be on the lookout for physical defects such as near-sightedness, inability to hear quickly, etc.

The question of seating having been relegated to the background for the present, next in order are the opening exercises, and here is where your own individuality must come to your aid. A topic for an opening talk will suggest itself — something that you have noticed on the way to school, or something suggested by a chance remark — a talk on the birds, flowers, ferns or some industry or object purely local.

If you can get the children talking and arouse their interest, the work of examination will commence at once, and you can begin to take mental notes as to their use or abuse of English, their love of nature work, and their powers of observation.

However, we never feel that we can get to work with a new school until we can associate names with faces, so, after the opening exercises, the obvious thing is to get the enrolment, with ages and some idea of classification. Perhaps the easiest way to do this, is to give each child a slip of paper — prepared beforehand — and ask him or her to write on it the name and age, and the class to which he or she belongs. The observing teacher will learn much from these slips of paper.

In a great many ungraded schools, we find that the Reader has been the basis of classification, and the new teacher is indeed looking for trouble who dares to question a pupil's right to a place in any one class if he or she has already been promoted to the Reader which is used in that class.

It is not wise to make any changes or innovations on that first day. You may have entirely different working ideas from those of your predecessor, but changes must be gradual and tactful. As a result of your investigations the first day, you may decide that the children know absolutely nothing thoroughly; but, being new to the work, perhaps you do not yet know just what two months' vacation can do for children, and experience will teach you that the first day is anything but a fair test of the thoroughness of the work of previous teachers.

But if reading has played an important part in the work of classification, by all means let the children read. Choose one of the lessons that combines with reading some knowledge of history or geography, or literature, and test their knowledge in this way.

As another test, try giving the school some mental arithmetic, suiting the questions to the classes. There is no better way of finding out the characteristics of the genus child than by mental arithmetic. Watch them — the quick eager ones, the slow, phlegmatic ones, and the totally indifferent ones. The alert teacher will certainly here find help in the work of classification.

In a mixed school such as we have in mind, there will probably be a good many little ones, especially during the Fall Term, and whatever happens, these must not be overlooked. It goes without saying that they need an extra recess, and constant planning beforehand to keep them busy.

For those who have attended school before, the box of letters cut from coloured paste-board can be utilized, and their ingenuity in word-building tested. A story for reproduction, with crude illustrations, will hold their attention, or perhaps a short story placed on the board with blanks to be filled in—the completed story to be copied on their slates—will give the teacher some idea of their progress.

For the little ones just beginning, not much can be done that first day beyond making them feel at home, and getting them started on the very simplest lesson illustrated by a very simple drawing, rat, fly, cat, etc., or testing to see if they have any knowledge of numbers beyond the number one; if so, drawing one apple or two apples on their slates to illustrate that knowledge.

For the older ones, there has been tablet or slate work—a letter on some familiar subject, or a map, and the day's work draws to a close.

Not much real work has been accomplished perhaps, but you have taken stock of material and resources. You have decided that you can work in a little paper-folding and cutting with the younger ones; that you are going to give the Physical Drill a most thorough chance to do its work on some of those boys who carry themselves so atrociously. You see visions of hard work with those ambitious pupils who are preparing for Normal School, and when four o'clock comes, though unspeakably tired, you are not altogether discouraged, for this is only one day, and there is a feeling of thankfulness that all the things you are planning to do have not to be done at once, but that there are many days stretching ahead, to be filled with hard, but satisfying work.

Your principles and your objects must be high—the higher the better. And when you have grasped them, resolve to hold them tenaciously and over a long period. It matters less whether you have hit initially on the plan that is theoretically perfect than whether you throw yourself into it unswervingly and stick to it with all your might. Unswerving purpose and concentration are of the last importance. Stick to plans once formed, and do not let yourself think of changing them unless for the clearest reasons. It is firmness and persistence that bring success in the end probably more than anything else. You may be beaten at first; you may have to wait. But the courage that is undaunted and can endure generally at last prevails."—*Lord Haldane.*

The August Century.

(FICTION NUMBER.)

The August Century is, as usual, a Midsummer Fiction Number, with short stories to appeal to a wide variety of tastes—nine altogether, including "Under Silken Skins," a story of Southern horse-racing and love-making by Maria Thompson Daviess, and "Hoodooed," a tale of darky life and superstition by Alice Hegan Rice, of "Mrs. Wiggs" fame.

For those who do not care for fiction, there are further "Reminiscences of Tolstoy" by his son; part three of "Rodin's Note-Book," Marie Sukloff's story of her escape from a Siberian prison, and a paper on "The Slaves in America," by Professor Edward Alsworth Ross, besides new chapters from Arnold Bennett's delightful "Log of the Veisa," and of Albert Bigelow Paine's, "The Car That Went Abroad."

Literary Notes.

BIRD-LORE for June, aside from its reports on the spring migration, colored plates of birds and special articles, contains a report on the work of the National Association of Audubon Societies in forming Junior Societies for the study of birds under competent teachers. Nearly one hundred thousand children have been enrolled in these classes this season, or about double the number secured in 1913. At this rate of increase, in five years over one million and a half children will have received instruction in the value of birds to man.

AN EXPLANATION

Last November we printed in the REVIEW a little play for children called "Christmas Eve in the Forest," by Jean T. Leavitt. It should have been said then that the play was based on, "The Little Christmas Tree," by Susan Coolidge, and that the last half is really an adaptation of that poem. Miss Leavitt and the Editor alike regret that owing to a misunderstanding, this explanation has been so long delayed. The play was arranged by Miss Leavitt for her own pupils, with, at first, no thought of its appearance in print. At the time it did appear she was seriously ill, and did not know that due credit was not given to the author of the poem.

We regret to record the death of Mrs. R. C. Skinner, for eighteen years a member of the School Board of St. John. Mrs. Skinner was the first woman in New Brunswick to be appointed a school trustee, and the valuable services which she rendered to education during her term of office amply justified her appointment.

What we *like* determines what we *are*, and is the sign of what we are; and to teach taste is inevitably to form character.—*Ruskin.*

FOR FRIDAY AFTERNOON

THE WORLD; A CHILD SONG

Great, wide, wonderful, beautiful World;
With the wonderful water round you curled,
And the wonderful grass upon your breast,
World, you are beautifully drest.

The wonderful air is over me,
And the wonderful wind is shaking the tree;
It walks on the water, and whirls the mills,
And talks to itself on the tops of the hills.

You friendly earth; how far do you go,
With the wheatfields that nod, and the rivers that flow,
With cities and gardens and cliffs and isles,
And people upon you for thousands of miles?

Ah, you are so great, and I am so small,
I tremble to think of you, World, at all;
And yet, when I said my prayers to-day,
A whisper inside me seemed to say.—

"You are more than the earth, though you are such a dot;
You can love and think, and the earth cannot.

—William Brighty Rands.

MY FOLKS

I think my folks are very queer—
You'd be surprised at things I hear.
Sometimes it seems I'm very small,
And then again I'm big and tall.

At night I tease to stay up late,
But mother says: "No, no, it's eight;
Go right up stairs; and hurry, too.
Indeed—a little boy like you!"

At six next morning, from the hall,
She wakes me with this funny call:
"Come, come, get up; and hurry, too.
For shame—a great big boy like you!"

When through the night I grow so fast,
How very strange it doesn't last!
I shrink and shrink till eight, and then
I'm just a little boy again.—*Harper's Magazine.*

FOUR THINGS

Four things a man must learn to do
If he would make his record true:
To think without confusion clearly;
To love his fellow-men sincerely;
To act from honest motives purely;
To trust in God and heaven securely.

—Henry Van Dyke.

EIGHT O'CLOCK

Of all the things the clock can say,
The one I do not like
Is "Eight o'Clock," that, twice a day,
The clocks and bells all strike.

For Eight is "Time-for-School," you know,
And Eight is "Time-for-Bed;"
And when it strikes, you have to go—
There's nothing to be said.

Sometimes it's "Circuses" at Two,
And sometimes "Matinee,"
And Three o'Clock is "School is Through,"
And Four o'Clock is "Play."

And Five o'Clock, and Nine, and Ten,
Eleven o'Clock and One,
Why, nice "Perhaps-Things" happen then—
("Perhaps" is always fun).

And Twelve and Six go very fast.
With "Things-upon-a-Plate,"
But soon as Seven hurries past,
You hear the clock strike Eight!

So when I'm grown and have my say,
And help to make things go,
I'm going to take the "Eight" away
From every clock I know!—*St. Nicholas.*

COURTESY

Love's perfect blossom only blows
Where noble manners veil defect.
Angels may be familiar; those
Who err each other must respect.

—Coventry Patmore.

A SLIGHT CORRECTION.

BY A HALIFAX CORRESPONDENT.

The brief account of the Empire Day celebration in Halifax in the last issue of the REVIEW was hardly fair in regard to the programme of speeches. The chief speech of the occasion was delivered by ex-President Forrest of Dalhousie. Speeches were also delivered by Mr. R. V. Harris, Chairman of the School Board, by Major Bligh, by his Lordship Bishop Worrell and by Dr. Edward Blackadder, ex-Chairman of the Board. The unfurling of the flag presented by the school children of Halifax, England, was indeed a touching and interesting incident. The vast Arena Rink was filled to its seating capacity.

THE WILLOW BRANCH.

It was a holiday, and the children were planting trees in the garden.

"My tree is an oak," said Kenneth, "and the oak is the king of trees."

"Mine is a pine-tree," said Bertha. "I love to hear the pine-trees sing!"

"I am going to plant a maple," said Rose, as she flourished her little spade; "then it will have pretty red leaves in the autumn."

"I wish I had a little tree," said Baby Dot.

The children were busy, and did not notice Baby Dot till she came up and waved a long willow stick, with which Kenneth had been playing horse.

"I found a tree!" she said again and again.

Bertha and Rose smiled at each other while the baby dug a tiny hole, in which she set the willow branch; then she stamped down the earth with her little soft shoes.

"Don't tell her that her tree won't grow," whispered the thoughtful Bertha. "She will forget all about it to-morrow."

True enough, Baby Dot did forget her tree, and moreover, there came a week of rain, so that the children could not go into the garden. But the willow branch liked the rain; it pushed a little white root into the ground, and a little green leaf into the air, and it grew just as fast as it could.

"Why, see here!" cried Bertha, one day, when she was looking at the trees. "Baby Dot's tree is alive and growing! Who ever heard of anything so queer!"

Every one wondered at the baby's tree when they saw it put out new leaves and shoot up so fast that it was soon far ahead of the slow maple and the slower oak. And when Baby Dot grew a tall girl, her willow-tree was a great deal taller than she. The robins sat in it and sang, and built their nests in its branches.

E. H. T. in Youth's Companion.

The Niagara conference dissolved without bringing an end to the war in Mexico, though not without good results. In pursuance of its plans, General Huerta has resigned his office as Provisional President of Mexico, and has left the country. There being no vice-president to succeed him, he was succeeded by the official next in rank; who, it is reported with the advice of Federal Council, has made terms with Carranza, the leader of the Constitutionalists, and will allow him to occupy the City of Mexico without opposition. Zapata, it is believed, will also come under Carranza's rule, so that there will be peace in the central and southern provinces; but it is said that Villa will act independently and keep up the rebellion in the north.

CURRENT EVENTS.

All other current events of the last two months that seemed worth noting as matters of permanent interest are now of little importance beside the great event — the outbreak of the longdreaded European war. When King George at Plymouth, on the twentieth of last month, reviewed the greatest fleet of warships ever assembled, people generally looked upon it as an ordinary naval review on a somewhat larger scale than usual. Three days later, the great ships went to sea under sealed orders. It was soon learned that France and Russia were gathering their forces along their German frontiers for fear of attack; and that Austria was moving an army in the direction of Serbia, and had made demands upon the Servian government which might be regarded as the signal for a general war. If Russia would support Serbia, because of racial sympathies, Germany would support Austria for the same reason; and also because through Austria, as a result of the war, she might hope to gain access to a Mediterranean port. It was repeating the situation of a few years ago, when Austria, in defiance of Russian protests, annexed Bosnia with its Servian population. At that time Russia decided not to take up arms, because war with Austria would have meant war with Germany. That, however, was but postponing the struggle which must determine whether the Slavonic or the Teutonic race shall rule in Eastern Europe.

War between Austria and Serbia began on the twenty-eighth of July. For a few days there was hope of localizing the conflict; but that hope soon disappeared. The German menace had become something more than a menace. Germany was ready to strike; and struck quickly, without waiting for a declaration of war. Her armies invaded France; one of them, planning to attack France on her weakest side, entered Belgium, in violation of the Belgian neutrality, thus bringing Britain into the struggle as the protector of Belgium; and German ships attacked British ships on the North Sea. Great Britain declared war on the fourth of August, France on the same day, and Russia a few days earlier. Montenegro joined with Serbia to resist the Austrian invasion. Greece will support Serbia. Italy and the other nations of Europe remain neutral, at least for the present. No one can tell where the war will end. It will certainly be the most terrible that the world has ever seen.

The immediate cause or occasion of the war was a murder such as furnishes the device and motto for the seal of the State of Virginia. By some strange twist of the mind, murder seems less abhorrent when it has a political motive. The crime was committed in Bosnia; and the victim was the Archduke Ferdinand, heir to the Austrian throne, the strongest and most aggressive of the Austrian leaders who were regarded as the enemies of Serbia. Many Servians were implicated in the plot which led to the assassination, thus giving the Austrian government every excuse for demanding reparation. But the demand that Austrian officers be allowed to hold the investigations in Serbia was apparently only made to be rejected. It was neither accepted nor refused; but the answer was deemed unsatisfactory, and that was all that was needed to bring on the war.

SCHOOL AND COLLEGE.

Over 150 teachers are in Fredericton taking the Physical Training Course and Cadet Instructors' Course.

Ninety-three teachers are taking the Physical Training Course, twenty men and seventy-three women, under the direction of Lt. A. S. McFarlane, of the 71st Regiment.

Three classes have been formed, with 8.30 to 11.30 a.m. and 3.30 to 6 p.m. as the hours, each class having two sessions daily.

Upwards of sixty have applied for the Cadet Instructor's Course, which is being given under the direction of Major A. C. B. Hamilton-Grey, the officer commanding, by Sergeant Master Good, Sergeant Shaw and Quarter-Master Sergeant Warren, of Infantry Station, No. 3. Both courses will continue every day until July 31st.—*Fredericton Gleaner*.

The Summer Rural Science School for New Brunswick opened in the Vocational school building, Woodstock, on Wednesday, July 8th, with a full complement of teachers, an average of nine from each county. The school is under the general direction of Director R. P. Steeves, and there is a competent staff of instructors. Among those who will give occasional lectures, is Mr. William McIntosh, curator of the Natural History Museum. The school will close on August 5th.

The Strathcona Trust prizes for graded schools in Inspector Meagher's district were won this year by the classes under Mr. Walter S. Daley and Miss Helena Mulherrin, of the Broadway School, Woodstock.

The new annex of the Normal School building, Fredericton, has been taken over by the provincial Department of Public Works. The new building, which cost about \$50,000, will provide the additional accommodation which has long been needed at the Normal School, and will allow of arrangements for new courses of instruction. Besides the erection of the annex, improvements and repairs have been made in the older portion.

A. S. McFarlane, of the Normal School staff, has received an offer of an appointment as professor of English at the school for Protestant English speaking teachers in connection with McDonald College at St. Anne De Bellevue, Quebec. Mr. McFarlane has asked the Board of Education to relieve him from his contract as a teacher at the Normal School. The salary which goes with the professorship is \$2,000, with a house provided. The school for teachers is one of the Province of Quebec's institutions and is one of three schools making up the MacDonald College. In the event of the Board of Education deciding to accede to Mr. McFarlane's request, he will take up his new duties the first of September. While not wishing to stand in the way of his advancement in his profession, the education authorities will be loath to have Mr. McFarlane leave. He has been a successful instructor and has met with special success in conducting the instructions in physical training, as well as the Cadet Corps. He was for a number of years on the staff of the Fredericton High School, resigning in 1909 to go to the Normal School.

New Brunswick's share of the \$800,000 voted by the Dominion Parliament this year, to the Provincial governments under the Agricultural Instruction Act will be \$49,407.00.

Dr. W. S. Carter, chief superintendent of Education for New Brunswick, delivered an address before a convention of superintendents and inspectors of schools held at Castine, Maine, early in July. Dr. Carter's subject was, "The School System of New Brunswick."

The resignation is announced of Mr. W. B. Belyea from the Board of School Trustees at Woodstock.

Miss Mildred E. Wallace, B.A., has been appointed principal of the Grammar School at Andover.

Mr. A. D. Jonah is leaving the High School at Sackville, where he has been principal for years, to take the principalship in the school at Florenceville, Carleton County. At the closing of the Sackville school, the retiring principal was presented with a handsome travelling bag, as a token of the esteem in which he was held by his pupils. Mr. Jonah's place will be taken by Mr. E. D. McPhee; from the Middle Sackville school.

Much regret was expressed in Lower St. Mary's on the resignation of Miss Evelyn Carton, the principal of the school there, after three years' of faithful work. The school presented Miss Carton with a club bag, and an address expressing their regret and good wishes.

The University of Saint Joseph celebrated its fiftieth anniversary on June 17. An important feature of the celebration was the unveiling of the statue of Rev. C. Lefebvre, C.S.C., founder of the University. The Most Reverend T. Casey, Archbishop of Vancouver, officiated at the unveiling, and delivered an address. Among those who received the degree of M.A. at the Encœnia, were Prof. Alphee Belliveau of the New Brunswick Normal School, and J. F. Doucet, Inspector of Schools.

Hon. John E. Wilson has been appointed a member of the Board of Governors of the Boys' Industrial Home, St. John.

Mrs. E. R. Taylor has been appointed a member of the St. John Board of School Trustees, in place of Mrs. R. C. Skinner, resigned.

Of a class of eighty-eight young men and women graduating this year from McGill University, over fifty per cent. were from the Maritime Provinces.

The vacancies in the Moncton High School staff, caused by the resignation of Mr. W. H. Irving, Rhodes Scholar, and Miss Beatrice Welling, are to be filled by the appointment of Mr. W. McL. Barker, principal of the St. George schools, and Mr. Emmerson C. Rice, of Woodstock.

The Rural Science School at Truro will be in session until August 6th. About 120 students are in attendance.

General regret is expressed at the retirement of R. D. McCleave from the principalship of the Springhill High School.

The attendance at the Nova Scotia Normal College for 1913-14 was 321, the largest in the history of the institution.

Sydney Academy has the distinction of for three consecutive years, having on its rolls the student gaining the highest "A" aggregate in this province. This speaks well for the teaching staff of the Academy.

Mr. W. A. Doone, who has been principal of schools at Bass River, N. S., has been engaged by the School Board of Antigonish to be principal of the High School in that town.

The Board of Governors of King's College are erecting a residence for women, to accommodate ten or twelve students. It is expected that the building, which is on the College grounds, north-east of the President's Lodge, will be ready for occupancy at the opening of the next term. The furnishing has been undertaken by the members of the Alexandra Society of King's College, and the new building will be called Alexandra Hall.

Mr. A. A. Sturley has been appointed as professor of physics and engineering at King's College. Mr. Sturley, who is an Englishman by birth, graduated in 1909, with first-class honours from Bishop's College, Lennoxville. He was the first Rhodes Scholar from that College, and took honours in physics and mathematics at Christ Church, since when he has had practical experience in engineering at the Hartly University College, Southampton.

The campaign week of the Dalhousie University students in the city of Halifax, brought in the splendid sum of \$11,320.

The Academy at Windsor, N. S., has had an interesting exhibition of the work done by the boys and girls in grades VI to X, in mechanics, science and needlework. The excellent work shown in both departments reflects great credit on the instructors, Mr. Charles L. Wood and Miss Walker.

The Knights of Columbus at Sydney, N. S., have started a movement to aid in providing salaries for new professors at St. Francis Xavier's College, and have paid over the first contribution of \$500. Three new professors are to be added to the College staff.

At Westbrook, N. S., Miss Effie Mott has organized an Improvement Society among her pupils, and they have worked hard at beautifying the school grounds.

The Amherst School Board is steadily progressive. Their latest step is to engage Miss Kate Brundage as supervisor and teacher of music in the schools. Inspector Lay introduced an efficient system of teaching singing some years ago, and the results have been good.

Mr. Alexander D. Fraser, B.A., of Pictou, N. S., has been appointed as professor of classics in Moose Jaw College, Saskatchewan.

Professor Everett W. Sawyer, formerly of the staff of Acadia University, and lately principal of O'kanagan College, Summerland, B. C., has been obliged to resign his position on account of failing eyesight. His many friends in the East will regret to hear of his affliction, and of the loss to the educational world, caused by his forced retirement.

The following teachers have resigned from the staff of Colchester Academy, Truro. Messrs. H. E. England, M.A., H. Lockhart, B.A., L. H. Coldwell and Miss Gladys Lawrence, B.A. The new appointments to fill these vacancies are—Mr. H. L. Bustin, principal of Bridgetown High School; Mr. J. H. Fitch, principal of River Hebert High School; Miss Sadie Porter, B.A., former principal of the High School at Baddeck, and Miss May Rudolph, of the Amherst Academy staff, formerly principal of Guysboro Academy.

The friends of Dr. C. B. Robinson, who was killed in December last in Amboyna, have started a movement

to raise \$1,000 to provide an annual Charles Budd Robinson, Jr. Scholarship in Botany on graduation from Pictou Academy. We understand that there is also to be a memorial to Dr. Robinson in Manilla.

Miss Etta Guild of Great Village, N. S., has resigned the principalship of the Ellis School, Penticton, B. C.

Dr. Aaron J. Perry of the University of Manitoba is spending the summer in the study of English at the British Museum, and at the Universities of Oxford and Cambridge. Dr. Perry's special interest is in 14th Century English, with manuscript work.

A Sweet Pea Show is to be held in Kentville, August 18th. Among the prizes are two offered for the best ten blooms grown by (a) any girl, (b) any boy, attending any school in the parish of Cornwallis.

The fifth annual trip of Canadian teachers to the Mother Country under the "Hands Across the Sea" movement is now in progress.

Miss White, of the General Brock School, South Vancouver, B. C., is one of the first Canadians to take advantage of the opportunity for interchange of teachers made possible by the "Hands Across the Sea" movement. Miss White will teach for a year in a London School and her place at home will be taken by a London teacher of equal standing.

The Summer School of Science for the Atlantic Provinces and the Prince Edward Island Teachers' Summer School are this year holding a united session in Charlottetown, P. E. I. The attendance is very large, between four and five hundred, and the work is going on vigorously, from early morning until dark. This is the twenty-eighth session of the Summer School of Science, and the fifth session under the management of President S. A. Starratt. A report of the work of the school will be given in the September REVIEW.

BOOKS RECEIVED

Those who wish to teach or to study argumentation as a branch of English Composition, can hardly do better than to use the little book published in the Standard English Classic's series, containing Macaulay's two speeches on Copyright, made in the House of Commons in 1841-42, and Lincoln's address at Cooper Institute on the right of the Federal Government of the United States, to control slavery in the Federal Territories. These speeches are admirable examples of clear and forcible English. The introduction and notes contain excellent supplementary material. [Ginn & Co., Boston. 100 pages, 25 cents].

A convenient little edition of six of Lamb's Tales from Shakespeare is edited by A. R. Weekes, M.A. The *Tales* in this volume, which is marked Series II, are *Othello*, *Macbeth*, *Comedy of Errors*, *Midsummer Night's Dream*, (by the way, why do so many people call it "A Midsummer *Snight's Dream*?" *Much Ado about Nothing*, and *The Winter's Tale*. "Faint and imperfect images," Lamb himself called these stories. But they have their own beauty. Why do not teachers use them as "supplementary reading," to read aloud to classes below High School age? The notes in this edition are chiefly explanations of words

Interprovincial Education Convention

[P. E. I., N. B. and N. S.]

To Meet in the **TECHNICAL COLLEGE, HALIFAX**

26, 27 and 28 August. 1914

PROVISIONAL PROGRAM

WEDNESDAY, 26th

- 9.00 a. m. Registration.
- 10.00 a. m. Opening Address by Dr. Carter, Superintendent of Education for New Brunswick.
- 10.30 a. m. "Uniformity of School Texts throughout Canada," by Prof. H. Murray, LL. D., Dalhousie University.
- 11.00 a. m. "Standardization of Secondary Education and of Teachers Training Certificates and of School Statistics throughout Canada; and the advantage of a Dominion Education Bureau," by Dr. A. H. MacKay, Superintendent of Education for Nova Scotia.
- 11.15 a. m. Discussion opened by Dr. Bridges, Supervisor of Schools, St. John, N. B.; R. H. Campbell, B. A., Superintendent of Education, P. E. I.; S. A. Starratt, Principal of Public Schools, Roxbury, Mass., U. S. A.
- 2.00 p. m. "Vocational, Industrial and Technical Education," by Dr. Jas. W. Robertson, C. M. G., Ottawa.
- Discussion opened by Theodore Ross, B. A., Charlottetown; R. P. Steeves, M. A., Director of Rural Science Schools, N. B.; Loran A. DeWolfe, M. Sc., Director of Rural Science Schools, N. S.
- 4.30 p. m. "Our claims to Federal Subsidies for the support of Education in the Atlantic Provinces," by Dr. Soloman, Principal of Normal College, Truro.
- Discussion opened by Members of the Provincial Governments of P. E. I., N. B., and N. S., (to be continued at the evening session.)
- 8.00 p. m. Public Meeting. "Cooperation of the Home and School," by Controller Harris, Chairman of the School Board, Halifax.
- 8.30 p. m. Addresses by Members of the Governments of P. E. I., N. B., and N. S., by Dr. J. W. Robertson, C. M. G., and others.
- 9.30 p. m. "Archaeology of Canada," with Stereopticon views, by Harlan I. Smith, Archaeologist of the Geological Survey of Canada.

THURSDAY, 27th

- 9.00 a. m. "The Medical Inspection of Schools," by Dr. E. Blackadder and Dr. J. G. McDougall, of Halifax.
- Discussion opened by Dr. S. L. Walker, Truro.
- 10.30 a. m. "The Cadet Movement and Physical Training," by Geo. N. Elliott, Esq., Secretary Can. Defence League, Toronto.
- 11.00 a. m. "The Cadet Movement in New Brunswick," by A. Sterling McFarlane, A. M., Prov. Nor. School, Fredericton.
- 11.30 a. m. The Benefits to accrue to Education from a better system of Taxation.

- 2.00 p. m. (Provincial Educational Associations meet separately). N. S. Educational Association. Organization. Report of Committee on High School Course of Study by Inspector MacIntosh of Lunenburg. Election of two members to Advisory Board, etc.
- N. B. (1) Election of officers. (2) Election of Representatives to Sen. of U. N. B. (3) Discussion of Nature Study and Agriculture, grades I to VIII.
- P. E. I. Organization, etc.
- 8.00 p. m. "The Duty of the State in reference to the Feeble-Minded," By Dr. W. E. Fernald, Supt. Mass. Sch. for the Feeble-Minded. Illustrated by the Stereopticon.

SOCIAL ENTERTAINMENT. ADDRESSES.

FRIDAY, 28th

- 9.00 a. m. Discussion on the Feeble-Minded, opened by Mr. E. H. Blois, Superintendent of Dependent and Neglected Children.
- 9.30 a. m. "A three or four year's Undergraduate College Course— which?" Rev. President Cutten, Acadia University; Rev. President Powell, Kings University; President MacKenzie, Dalhousie University; Rev. President McPherson, St. Francis Xavier University; Rev. President Borden, Mount Allison University; Chancellor Jones, University of New Brunswick and Dr. Robertson, Principal of Prince of Wales College. (15 minutes papers.)
- 11.00 a. m. "Teachers' Salaries and the Rural School Problem" by W. A. Creelman, B. A., Principal Sydney Academy, and Inspector V. Crockett, President Teachers' Association, P. E. I.
- 2.00 p. m. Resolutions, postponed discussions, and other business.
- 5.00 p. m. Adjournment.
- Colleges, School Boards and Teachers' Institutes are invited to send Delegates to the Convention.
- For Nova Scotia teachers complying with the provisions of Regulations 143, 144 of the School Law, the time required for attendance at the Convention will be taken as Teaching Days.
- For New Brunswick teachers attending, Schools open 31st August.

In order to get free or reduced Return fares, members are required to secure Standard Certificates when purchasing going tickets. Please see that the certificates are properly signed and all other conditions as printed on them carefully observed.

A. MCKAY,
Sec. Executive.

Halifax, N. S., July 27th, 1914.

and phrases, and will be useful. [University Tutorial Press. 120 pages. 1s. 4d.]

Junior Book VII. in the *Pier's Plowman Histories* is no less highly to be recommended than the preceding volumes that we have noticed. It covers the period in English History from 1485, till the present day, and deals in a most interesting way with the questions of government, and of colonial expansion. Ireland is not touched upon, nor the Indian Empire, but are left for other volumes. The book contains eighty-eight maps and illustrations. [George Philip & Son, London. 296 pages. 2s.]

It is very desirable that our girls should have put before them for example and stimulus the lives of women who have done good work for their country. To this end

Miss Edith Horton has written a collection of brief sketches of famous women. With the exception of Joan of Arc, Queen Victoria, Florence Nightingale and Elizabeth Fry, the subjects of these little biographies are all American women, but the achievements narrated are in widely varying fields. The book is written in a very interesting way, and is an excellent one for reading aloud to a class or for a prize. [A *Group of Famous Women*, D. C. Heath & Co., 50 cents].

England, Scotland, and Ireland, in the *World Literature Readers*, also offers admirable material for supplementary reading. The selections are well chosen and not hackneyed. The illustrations are either of famous places, or reproductions of great pictures. We have commended this charming set of books before 'Ginn & Co., 45 cents. 276 pages].

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New Brunswick School Calendar, 1914-15

1914. FIRST TERM.
Aug. 26.—Public Schools open.
Sept. 1.—Normal School opens.
Sept. 7.—Labor Day (Public Holiday).
Thanksgiving Day (Public Holiday).
Dec. 15.—Examinations for Class III License begin.
Dec. 18.—Normal and Public Schools close for Christmas Vacation.
1915. SECOND TERM.
Jan. 4.—Normal and Public Schools open.
Apr. 1.—Schools close for Easter Vacation.
Apr. 7.—Schools re-open after Easter Vacation.
May 18.—Loyalist Day (Holiday for St. John City only).
May 23.—Empire Day (Observe May 21st).
May 24.—Victoria Day (Public Holiday).
May 24.—Last Day on which Inspectors are authorized to receive applications for Departmental Examinations. Reg 38-6.
May 25.—Examinations for Class III License begin.
June 3.—King's Birthday (Public Holiday).
June 4.—Normal School Closing.
June 8.—Final Examinations for License begin.
June 21.—High School Entrance Examinations begin.
June 30.—Public Schools close for Year.

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Devoted to Advanced Methods of Education and General Culture

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St. John, N. B.

To Our Subscribers.

In order to avoid confusion and delay will all subscribers who have changed their addresses kindly notify us at once, giving both the old and the new address.

Some of our old subscribers sent changes of address too late for change in the August mailing list. Such notices should reach us before the first of the month.

It has been announced that the Fourth International Congress on Home Education will meet in Philadelphia, September 22-29. It was in Liege that the first Congress met, in 1905, and the third Congress met in Brussels in 1910.. The President of the Commission on these Congresses is H. R. H., the Duchess of Vendome, sister of King Albert of Belgium. That gallant nation has a title to honour in the arts of peace as well as in war.

If from any cause you wish to discontinue your subscription, do not fail to send a notice to this office. The REVIEW is always continued to an address until the subscriber notifies us to stop it. Look at the date upon your address label.

We cordially welcome the organization of the High School Teachers of New Brunswick, as we believe that such an association can do a great deal to increase the usefulness of the profession, and to add to its dignity and honour.

Now is the time for our Empire Day teachings to bear fruit. Do we yet fully realize the unity of the Empire, and our duty as her citizens? Combat the idea that in sending men and money Canada is merely "helping England," as she would help a friend. It is the Empire that is at war, and the Empire is one.

No easy hopes or lies
Shall bring us to our goal —
But iron sacrifice
Of body, will, and soul.

There's but one task for all
For each, one life to give;
Who stands if freedom fall?
Who dies if England live?

— Rudyard Kipling.

NATURE STUDY OF ANIMALS.

H. E. PERRY.

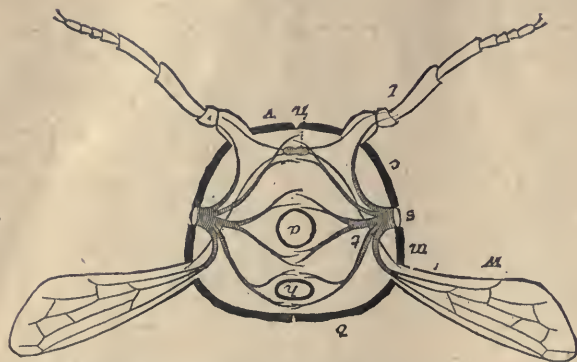


Fig 1. Ideal cross section through an insect: h, Heart; n, Nerve Cord; s, Spiracle. [breathing pore]; t, Tracheal Tubes; l, Legs; w, Wings.

The alimentary canal or digestive tube has already been described and pictured in these studies. See EDUCATIONAL REVIEW, August issue, page 35, Fig. 4.

The heart is a delicate tube extending along a median dorsal line immediately under the integument. In most adult insects it consists of a series of chambers, each of which permits the ingress of blood, but hinders its egress; while within the chambers are valvular folds, which allow the blood to move forward only. The blood enters the dorsal vessel through the lateral valves.

The pulsating portion of the dorsal vessel is confined for the most part to the abdomen. It is continued as a simple tube through the thorax, and into the head region, where it passes under the brain and divides into two branches. If the posterior or pulsating portion is called the heart, the anterior portion must be called the aorta. Compare this arrangement with the heart and aorta of higher animals. On the under or neutral side is another long blood tube, in which the blood flows backward. From these tubes the blood flows through spaces between muscles, tracheae, nerves, etc., bathing all the tissues.

The blood of insects is not red. It consists chiefly of a watery fluid or plasma, which contains corpuscles or leucocytes. Compare it with the blood of higher animals. What gives the red color to our own blood? If the red corpuscles were removed how would the residue compare with the blood of insects? How can insects get along without red corpuscles?

Note the position of the nerve cord. It is neutral, and is the chief central nervous system

of the animal, and extends along the median line of the body as a series of ganglia connected by nerve cords, a ganglion for each segment. In the head, however, we find a fusion of ganglia into two centres or masses; the foremost being dorsal to the œsophagus is called the brain or supracœsophageal ganglion, and the lower on the neutral side, the subœsophageal ganglion, and the two are connected by a girdle of nerve tissue around the œsophagus.

The brain gives rise to the optic nerves, and the nerves to the antennae. It is the seat of will, using the term "will" in a loose sense; and it directs the locomotor movements of the legs and wings.

The subœsophageal ganglion controls the mouth parts, co-ordinating their movements as well as some of the body movements.

The thoracic ganglia govern the appendages of their respective segments, and in common with the ganglia of the abdomen are to a great extent independent of brain control, each being an individual motor centre for its particular segment. This explains why decapitated insects are still able to breathe, walk or fly, and often retain for days some power of movement.

The respiratory system of insects consists of the spiracles and tracheal tubes. The tracheal tubes divide and sub-divide until they become extremely delicate tubules which penetrate even between the muscle fibres, and the other tissues of the body, and possibly even enter the cells, and thus convey air to the remotest tissues.

Fig. 1, shows the tracheal system in cross section in the region of the wings and legs. For the lateral distribution of the spiracles, see REVIEW, August issue, page 34, Fig. 1. Count them in the grasshopper, and compare with other insects. Winged insects never have more than ten pairs, although there are twelve segments in which they may appear—the three thoracic and the first nine abdominal segments.

The respiratory movements are entirely reflex and are independent of the brain, for they continue after decapitation, and even in the detached abdomen of a grasshopper or dragon fly, each neutral ganglion is an independent respiratory centre for its own segment.

The grasshoppers, locusts, crickets, cockroaches, etc., belong to a group or order of insects, called the straight-winged insects, technically known

as Orthoptera. Look up the derivation of this term in a dictionary, and after examining members of this order, note how appropriate the name is.

The fore wings are thickened, serving as a protection for the hind wings, which when at rest are folded or plaited like a fan.

The young when hatched from the eggs are of the same general form as the adults, and gradually attain the adult size by a series of molts, i. e., the development is said to be direct, or in other words, the metamorphosis is incomplete.



Fig. 2. The House-fly, [enlarged] a, Larva; b, Pupa or Puparium; c, Adult.

FLIES.

Examine a house-fly, (*Musca domestica*). Note the division of the body, head, thorax, and abdomen. How many pairs of legs has it? Is it a true insect? How many pairs of wings do you find?

Upon close examination you will find small rudimentary hind wings. They are called balances. In the crane-fly, a form which looks like a large mosquito, the balances are quite prominent and end in a little ball or knot.

The term "fly" is often indiscriminately used for all small flies with membraneous wings, but strictly it is applicable only to the two-winged insects,—Order, Diptera. What is the derivation of this word? Derive the names of other orders of insects as you meet them from time to time.

This is a large and important order, containing about seven thousand American species.

The mouth parts are fitted for piercing, sucking or lapping. As pictured in Fig. 2. the larva is much unlike the adult in all the species, and is followed by a resting stage, the puparium, i. e., the metamorphosis is complete.

There are hundreds of different kinds of flies in Canada. Among some of the more common are horse-flies, bot-flies, blow-flies, the ox warble fly, sheep bot-fly, mosquitoes, gnats, horn-flies

stable-flies, Hessian-fly, the typhoid fever or house-fly, crane-flies, etc., etc., Many of these are very injurious to man, his crops, and animals.

The house-fly has long been considered a nuisance about the house, and it is now known as the principal insect agent in the spread of typhoid fever.

Its habits and life history are well known. It hibernates, sheltering itself in cracks and crevices, and is occasionally seen about the house during the winter. They breed chiefly in stable manure and door-yard filth, during the summer. The eggs, numbering about one hundred, hatch in about a day into smooth white conical, almost transparent, footless larvae, called maggots. The larvae feed for about a week, molting twice, and then pupate, remaining in the resting stage another week, when the winged form appears. In a summer the descendants of a single pair may reach an incredible number.



Fig. 3. Life History of a Mosquito, [*Culex*]. [Much enlarged.]

In Fig. 3. note the adult, winged form of the mosquito, just above a small raft of eggs floating on the surface of the water. Several long slender larvae are in the water, they are often known as "wrigglers" or "wigglers." Examine rain

barrels and stagnant ponds and pools for wrigglers. If taken home in a glass, the resting or pupal stage is readily seen. It is pictured as a large form just under the egg-raft.

The mosquito requires from ten to eighteen days to complete this life cycle.

Since the female lays over 200 eggs in a raft (the eggs in a raft vary from 200 to 400) it has been computed, allowing ten days for a generation, that in 180 days the progeny of one pair would number, 2,000,000,000,000,000,000,000,000,000,000,000,000,000,000. No wonder mosquitoes are plentiful every year!

See that rainbarrels and stagnant pools near your home are properly protected, or drained, if you wish to keep this pest in check.

Some forms of the mosquito are carriers of deadly diseases. One genus, *Anopheles*, is the intermediate host and transmitter of the malarial germ; another, the *Stegomyia*, common in warm countries, is the yellow-fever mosquito.

The carrier of the typhoid germ is in our midst, and working incessantly every day. (Malaria mosquitoes are found also in our province). Reeking with filth of all kinds, and loaded with deadly germs, they enter our houses, flyspeck everything they can get at, crawl over our food, and fall into our milk and cream.

While people in agricultural communities will probably never be able to rid themselves entirely of this pest, they can do much to keep them down. In all our war upon flies we should understand that the major part of the battle is being waged for us by birds, bats, toads, etc., etc., in a struggle that has been going on for centuries.

Man owes a great debt to these helpers. Every scholar should know something about them, and learn to respect and protect them.

If we cannot prevent fly-breeding, we can prevent the flies from carrying filth and germs to our food in the kitchen and dining room. We can have a sanitary privy; the cost is not more than six or eight dollars. No Board of Health should permit the use of any other kind of privy. In addition every dining room and kitchen should be effectually screened against flies. The few that enter should be caught or killed at once, while those that seek admission should be captured in large traps, placed in the back yard.

[The cuts used in this article are copied from Sanderson and Jackson's Elementary Entomology, through the kindness of the publishers, Messrs. Ginn and Company, Boston, Mass.]

BOTANY OF A BLUEBERRY TRIP

L. A. DEWOLFE.

To the average person, picking blueberries means a pleasant drive of varying distance, the gathering of as many berries as possible, visions of blueberry pies, and a drive home.

To the nature student, however, there is all this and something more. On what kinds of soil do blueberries grow? What is meant by blueberry barrens"? Why is the soil partially barren, and why not wholly so? How many kinds of blueberries do you know? Do they all grow in similar localities? Does any one kind vary greatly? These are a few of the questions one might answer by thoughtful observation; and, in the meantime, our blueberry pail is being filled without our being conscious of the labor involved.

We have noticed that blueberries grow in swamps, rocky woods, peat bogs, pine barrens and old pastures. This is certainly a great variety of localities. It might be explained by supposing that different localities will afford different species; or it may be that the same species can adapt itself to varying circumstances. Both explanations are true.

In a dry pasture, for instance, one will find in August, patches of berries ripening earlier than others. One also finds a variation in the leaves of different patches. In some cases the leaves are a light green; in others, dark green. Some leaves are smooth; others, rough. Some are woolly, and some are not. Some have toothed margins, while others are entire.

In the case of the fruit, too, one finds differences. Some berries are *blue* and some are *black*. Some are elongated or pear-shaped. Most of them are nearly spherical. It is the common belief, however, that all these berries are of two kinds — the blue ones and the black ones. The average person does not notice the differences in leaves and twigs; but the color attracts his attention at once.

Now, take your botanical text book to the blueberry field. That is better than bringing the plants to the schoolroom and the text. You will find the botanist has divided practically all the pasture blueberries into two species; but he has not drawn the distinctions on color, as the amateur would. His Pennsylvania Blueberry and Canadian Blueberry are both blue. At this season, the leaves and twigs will enable you to distinguish the two species. Earlier, the corolla may have helped

though personally, I depend on the leaves at all times for identification. The time of blooming is also a help at that particular season.

But, you will say, what about the black ones? I find the text gives them as a *variety* of the Pennsylvania. Here is a chance for the inquisitive or ambitious student to find out, through reading, the technical difference between *species* and *variety*. I suggest, in connection with this, the reading of Mendel's Law, Plant Breeding, and similar topics in any good text on Biology or Botany. Two good books in connection with this are Darwin's "Origin of Species" and Burbank's "New Creations in Plant Life."

We spoke of the "black" blueberries. Rub a blue one, and notice that it becomes black. The blue coating that so easily rubs off is called "bloom". To find the probable use of this "bloom", dip a unrubbed and a rubbed blueberry into water, and see to which one the water adheres. Might the "bloom" be of service to the berry in wet weather? You will find a "bloom" on plums and other fruits.

What plants associate with blueberries? The bog blueberries have different neighbors from their pasture brothers. It is interesting to note that among the blueberries' neighbors we find Leather Leaf, Andromeda, Pale Laurel, Sheep Laurel, Rhodora, Pyrola and Mayflower, all of which belong to the same botanical family as the blueberry itself. Could it be possible that their common inherited tastes and habits have kept them together, just as in rural communities so many members of the human race are relatives? In the latter case many households trace their descent from one or two families who settled there a century or two ago. I wonder what tribe of plants was the common ancestor of the blueberry and its relatives centuries upon centuries ago!

Blueberries, as we all know, occupy waste or neglected ground. Is this a matter of choice or of expediency? What is the general nature of blueberry ground? When you go on that next trip take a piece of blue litmus paper with you. Test the moist earth. Test not only blueberry ground, but both cultivated and uncultivated ground in several localities. Of course you know that if the litmus turns red, the soil is "sour" or acid. If you find the blueberries nearly always growing in acid soil, is it safe to say they prefer that soil? Possibly they do. If we find certain regiments occupying, at present, certain positions in Europe,

possibly they are there because they were crowded out of better positions. On the other hand, they may be there from choice.

Some plants are so constituted that they cannot stand acid soil, they would die rather than submit to it. Blueberries and their relatives find life pleasant there; and find it easier to occupy the acid soil some other plants have abandoned than to fight their way to cultivated ground. The presence of blueberries, then, gives one some idea of the condition of the soil. Drainage and cultivation would bring in an invading army of other plants, and the peaceful blueberries would retire to the neglected pastures and bogs.

Topics for Nature lessons not yet mentioned are:

What insects have you found attacking blueberries? What is the science of *canning* blueberries and other fruit? What does Nature grow berries for? What is the geology of a blueberry barren or peat bog? Account for the "star" at the end of a blueberry. What about the blueberry industry? What is their geographical distribution? Why does a fire increase the blueberry crop? Try taking up these topics. Study them with your pupils.

RARE AND LOCAL FERNS.

J. VROOM.

In low, rich woods, or among wet rocks, let us look for the Maidenhair Fern. It is very scarce and local, but has been found at several places in Nova Scotia and in northern New Brunswick. The fan-like shape of its fronds, and the one-sided, wedged-shaped segments and glossy stalks, are so distinctive that it cannot be mistaken for anything else. The fruit is borne on the under side of a lobe of the frond which is folded over to form a covering. This is generally regarded as the most beautiful of our native ferns.

A rival of the Maidenhair in beauty, found in similar situations, is the Bulblet-bearing Bladder Fern. The stream which we are following is any one of a hundred brooks in Nova Scotia or New Brunswick. If it happens to be in a limestone region, we may search for this fern with good hope of finding it, especially if we look for it near falling water. Its slender bipinnate fronds are from one to two feet long, are widest at the base, and commonly bear on the under side a few fleshy bulblets which will fall off and begin life as independent plants.

The fruit dots before maturity are covered by a loose, bladder-like hood, which gives the name to the genus.

The Fragile Bladder Fern, or Brittle Fern, is more generally distributed, and much more difficult to determine. The hood which covers the young fruit dots soon disappears, and then the fertile fronds look like those of a shield fern. The leafy portion of the frond is from four to twelve inches in length, and is borne upon a slender, naked, brittle stalk which is fully as long. Perhaps the long and slender footstalk is the surest guide to its identification. The Brittle Fern may be found in almost any situation, from dry cliffs to open wet places and rocky woods. Its fronds are very variable in shape; but, even when heavily loaded with fruit, they are graceful. They mature and wither before the summer is over, and sometimes new fronds appear in August. We may possibly find both the old and the new, though it is not a good time to look for either.

If we are in the southern part of Nova Scotia, we may by rare good fortune, find in a bog the Virginian Chain Fern. Its fronds somewhat resemble the sterile fronds of the Cinnamon Fern; and the oblong fruit dots are arranged in chain-like rows near the midrib.

If in Cape Breton or in New Brunswick, there is a fair probability of our finding the Rusty Woodsia; a very interesting little fern, and one easy to determine. It grows in crevices of the driest cliffs, and on exposed rocky banks; and its range extends northward to the Arctic regions, and westward to the Rocky Mountains. The fronds are from four to ten inches long, smooth and green above, but covered with a rusty chaff beneath; and have a jointed stalk, so that when they fall at maturity they leave about an inch of the stalk remaining. One or two other Woodsias, smaller, more naked and more delicate than this species, can be found on moist cliffs in northern New Brunswick.

The Holly Fern, well known in our greenhouses, which also extends to the Rocky Mountains and along the Arctic coast, has been reported from one station in Cape Breton. Other very rare ferns in our region are the Maidenhair Spleenwort, a pretty little fern with a dark purple thread-like stalk that accounts for the name, found on moist cliffs at several places in Nova Scotia; the Green Spleenwort, a small evergreen fern with a green stalk, found on limestone rocks in New Brunswick,

the Fragrant Shield Fern, known with us only at one place in Nova Scotia and two in New Brunswick, and the Slender Cliff Brake. The latter is a delicate little fern growing in crevices of shaded rocks in northern New Brunswick, but not reported elsewhere in the lower provinces. The fronds, twice pinnate, or nearly so, are from three to six inches in length, and quite unlike. The divisions of the fertile frond are narrow and pointed, the fruit hidden by the revolute margin as in the Common Brake. The sterile fronds are few and smaller, and their ultimate divisions are broad and rounded, not unlike those of the Smooth Woodsia which is sometimes found near it.

The Ostrich Fern and the Interrupted Fern will bear transplanting, and can be grown with good effect in a shady place in the garden. Some of the other native ferns will do well in places specially prepared for them.

It is said that the Maidenhair Fern and the Bulblet Bladder Fern were the first of our ferns to be taken to England. The writer remembers a mass of them growing together in the deep shade of a butternut grove as the most charming group of ferns he has ever seen. The butternuts were cut down later to clear the land, and their great trunks were burned because it would have cost more than they were worth to take them to market. This was many years ago. Butternut is scarcer now; and probably the aggregate value of all the crops that have grown there since, might not, equal the net value of the wood to-day. Certainly, all the roses and lilies that the land could be made to produce, would be less beautiful than the stately trees and the ferns they sheltered. No one, perhaps, would wish to keep private owners from extending the area of cultivation and including in it the richest land that they possess; but we may rejoice that some land owners can afford to keep the natural growth on a part of their holdings, even where they do not find it profitable to do so. There are still many spots within our reach where the beauty of nature is undisturbed; spots of sylvan calm and quiet, where the rapt visitor feels it almost a desecration to touch leaf or frond, and is glad that the springing moss will hide all sound and trace of his footsteps and leave no mark of his intrusion.

"They say that this will be the last great war."
 "It looks to me as if it was going to be the first."—*Boston Transcript.*

CENTENNIAL ANNIVERSARIES OF THE
WAR OF 1812.

J. VROOM.

September 21.—At daylight on the morning of the first day of September, 1814, a fleet from Halifax arrived off the mouth of the Penobscot, and the fort at Castine was summoned to surrender. After firing a few shots, the fort was evacuated and blown up. The British troops then took possession, and proceeded to occupy the surrounding country east of the Penobscot. Bangor and all the intervening towns were taken, after more or less resistance. A detachment of the fleet sailed for Machias, and occupied that place on the eleventh.

This expedition, under the command of Sir John Coape Sherbrooke, Governor of Nova Scotia, was not sent out to pillage and destroy; but to take and hold the territory with a view to permanent possession. At the close of the Revolutionary War, the Castine Loyalists who afterwards moved to St. Andrews, had sought to make the Penobscot the international boundary, claiming the district between that river and Passamaquoddy Bay as part of the ancient Acadia. They proposed to make it a separate province, under the name of New Ireland; but the St. Croix was finally accepted as the boundary, and so New Ireland did not find its place upon the map.

Wars abrogate treaties, however; and when General Sherbrooke thus took possession of the New Dominion, as he called it, the British peace commissioners at Ghent were planning to secure for Great Britain a cession of the northern portion of Maine, which lies between New Brunswick and Quebec, preventing direct communication. Though the commissioners finally agreed to a general restitution of captured territory, it was while the rectification of the boundary was under consideration that Castine and Machias were taken.

We shall not understand the war of 1812 unless we keep in mind the fact that there was little enmity towards us among the people of New England in general. Especially along the Maine and New Brunswick border there was good feeling, and a desire to make the best of the situation. Immediately after the British occupation of Machias, knowing that it was meant to bring about a change in the political boundaries, and ready to abide by the result, the authorities of Washington County, civil both and military, came forward and offered

submission. Thus Calais, Robbinston, Pembroke, and some twenty or thirty other towns and villages, came quietly under British rule; and the active militia, with General Brewer at their head, laid down their arms and were paroled.

General Sherbrooke issued his proclamation at Halifax on the twenty-first of September, formally annexing the whole territory to the British dominions; and it was held and governed by martial law until the close of the war.

THE HUMOROUS SIDE OF IT.

Charles Lamb had little difficulty in seeing the humorous side of things. To all who love his writings this familiar passage from a letter to a friend to whom he had entrusted his dog Dash will be re-read with pleasure:

"Excuse my anxiety, but how is Dash? * * * Goes he muzzled, or *aperto ore*? Are his intellects sound, or does he wander a little in his conversation? You cannot be too careful to watch the first symptoms of incoherence; the first illogical snarl he makes, to St. Luke's with him. All the dogs here are going mad, if you believe the overseers; but I protest they seem to me very rational and collected. But nothing is so deceitful as mad people, to those who are not used to them. Try him with hot water: If he won't lick it up it is a sign—he does not like it. Does his tail wag horizontally, or perpendicularly? That has decided the fate of many dogs in Enfield. Is his general deportment cheerful? I mean when he is pleased—for otherwise there is no judging. You can't be too careful. Has he bit any of the children yet? If he has, have them shot, and keep him for curiosity, to see if it was hydrophobia. * * * You might pull out his teeth (if he would let you), and then you need not mind if he were as mad as a Bedlamite."

It is one of the privileges of the small nations to amaze the world by their valor on the field of battle. Belgium is the latest example. In the Balkan war there was Montenegro, and before her the Transvaal, Switzerland, the Netherlands and Greece.—*Mail and Empire, Toronto.*

The likings of children are many; their duty is, after all, only one. It is not the task of the school to entertain the children; the true task is to teach them to do their best.—*Hugo Munsterberg.*

BIBLE READINGS FOR OPENING EXERCISES. NOTES ON HIGH SCHOOL LITERATURE.

1. Psalm XLIV, 1-6.
2. St. Matthew V, 1-9.
3. 1 Kings XIII, 22-25, 26, 44, 45.
4. Isaiah XXV, 1-4, 8, 9.
5. St. Matthew VIII, 5-10.
6. Psalm XLVI, 1-6, 11.
7. St. Matthew VI, 9-15.
8. Isaiah XXVI, 1-7.
9. 1 Peter II, 13-17.
10. St. Matthew XV, 29-31.
11. 1 Kings VIII, 57, 58, 60, 61.
12. St. Matthew VI, 25-34.
13. Psalm III, 3-6, 8.
14. 1 Peter II, 18-24.
15. St. Matthew XII, 46-50.
16. Psalm CXXII
17. Deuteronomy VI, 1-9.
18. Isaiah XLIII, 1-7.
19. 1 John III, 14-18.
20. Psalm, XVIII, 1-3, 46-49.

SEVERITY OF A MOTHER.

A very estimable widow in Germantown, Philadelphia, is the mother of a son who has given her much trouble by reason of his waywardness.

"I am afraid," said a friend one day, in speaking of the boy, "that you are not firm enough with him."

"On the contrary," said the mother, "I sometimes fear that I am much too harsh."

"Indeed!"

"Oh, I don't mean to say," the fond mother hastened to explain, "that I have ever really taken any summary action, but I have talked to him a great deal."

"And what have you said?"

"Why I have said, 'Richard! Richard!' and other severe things."—*Lippincott's*.

"There is no such thing as standing still in this world. Each soul is either a little stronger or a little weaker, a little nobler or a little less noble, a little more self-reliant or a little more dependent to-day than it was yesterday."

F. B. Meagher, Inspector for District No. 8, has been granted one year's leave of absence.

His place is being supplied by F. A. Dixon, with headquarters at Woodstock, N. B.

THE LAY OF THE LAST MINSTREL.

II.

Since writing my notes for August, I have had some welcome suggestions as to the difficulties in studying and teaching this poem. These are chiefly concerned with the story, and especially with the trouble I have already referred to, of getting the story confused with the setting. So I have thought it well to give a summary of each. The student will do well to mark off in coloured ink, or in some other conspicuous way, the following passages.

I. The Introduction.

II. Canto I, 346-363.

III. Canto II, (a) 330-345; (b) 416-434.

IV. Canto III, (a) 1-17; (b) 421-434.

V. Canto IV, (a) 1-25; (b) 564-627.

VI. Canto V, (a) 1-38; (b) 514-523.

VII. Canto VI, (a) 1-36; (b) 554-583.

SUMMARY.

I. In the time of William III (l. 20) a poor old wandering Harper, the last of the Minstrels, seeks refuge in Newark Castle. The Duchess is kind to him, and he offers to sing for her a "Lay" that he had once sung to Charles I at Holyrood.

II. At the end of the first part of his story, the Minstrel, fearing that he has lost his skill, is discouraged and timid, but the Duchess and her ladies praise him and urge him to go on.

III. (a) The Minstrel breaks off in the story to complain that he is too old to sing of love. (b) At the end of this Canto, he is seen to be weary. A page brings him wine, which refreshes him, and he goes on in a livelier strain.

IV. (a) He sings a little song in praise of love. (b) When he stops in the story, at the end of Canto III, his hearers applaud. They wonder that he should be alone in his old age, and ask if he has no children. He answers the question,

V. (a) And laments the death of his only son. (b) He explains that although many minstrels say "such combat should be fought on horse" he has the authority of his master "the jovial Harper" for saying that the fight of William of Deloraine and Musgrave was fought on foot. He goes on to tell that his master slew a rival for questioning the truth of this, and suffered death at Jedwood Air for the murder. He laments that he is the last survivor of his master's scholars. The Duchess, to cheer him, marvels how the minstrel can bring to life, in his song, forgotten deeds and heroes. The old man is pleased.

VI. (a) He tells how the Poet, when he dies, is mourned by the spirits of those whom he has celebrated in his songs — the Maiden — the Knight — the Chieftain — because they will now be forgotten. Their sighs and wails pass into wind,

“rivers and trees, and so it is true that ‘mute nature mourns.’” (b) A description of the music of the harp. The ladies applaud, and ask why such a musician should waste his time in a poor country like Scotland. This rouses the Minstrel’s indignation.

VII. (a) And calls forth the noble burst of patriotism beginning, “Breathes there the man.” (b) An account of the Minstrel’s later years.

When reading the poem aloud in class, the setting should be assigned to one good reader, who should read no other part,—or it might be best for the teacher alone to read it. Other devices for keeping it distinct will probably suggest themselves.

Three dates should be known, at least approximately, and often repeated:—The dates, (a) When the events of the story took place, middle of 16th Century (Lord Walter’s death was in 1552); (b) When the Minstrel lived, reign of William III. (c) When the poem was written, 1805.

In Canto V, 505 and 520, see that “the Minstrel” who “wailed” at Musgrave’s funeral is not confused with the “last Minstrel” who is telling the story.

SUMMARY OF THE STORY.

Canto I begins with a description of Branksome Hall, and the readiness of the family and retainers for war. It goes on to tell of the feud between Scotts and Carrs and the death of Lord Walter in 1552. Lady Scott and her little son desire revenge, but Margaret weeps because the feud will separate her from Lord Cranstoun, her lover, who had fought on the side of the Carrs. Lady Scott, who has magical powers, can understand the conversation between the spirit of the Flood and the spirit of the Fell, who say that love must be free. But to prevent her daughter’s marriage she sends William of Deloraine to Melrose to fetch the magic book of the great Wizard, Michael Scott.

Deloraine’s ride is described.

Canto II. Reaching Melrose at midnight Deloraine is led to the Wizard’s tomb by the Monk. They open the tomb. A mysterious light shows the dead Wizard and his book, which Deloraine secures. He starts for Branksome. The Monk dies.

Meanwhile, Margaret goes out at daybreak to meet Lord Cranstoun, whose Goblin Page now comes into the story.

Canto III. Cranstoun, leaving Margaret, meets Deloraine returning. They fight. Deloraine is wounded and Lord Cranstoun rides off, leaving the Page to tend the wounded man. The Page looks into the magic book, and learns a spell by which people or things may be disguised. By means of this spell he takes Deloraine into the castle, unseen, and entices the young Buccleugh away into the woods, where he is captured by English archers. The beacons give the alarm on the approach of enemies from over the Border.

Canto IV. The English advance to Branksome holding the young Buccleugh as a hostage, and demand the surrender of Deloraine for “march treason” and the murder of a Musgrave. The Lady refuses, but says that Deloraine will meet Sir Richard Musgrave in single combat. The English, hearing that an overwhelming force is coming against them, accept the challenge for the next day.

Canto V. The English and Scottish troops make merry together while the lists are prepared. A dispute arises as to who shall fight for the wounded Deloraine. Lord Cranstoun, who has entered the castle by the magic of his Goblin Page, appears and enters the lists as Deloraine. Musgrave is slain; the victor, upon the appearance of the real Deloraine, is found to be Cranstoun. The Lady, remembering the words of the spirit, consents to his marriage with Margaret.

Canto VI. The marriage feast is described. The Goblin Page plays mischievous pranks. Three famous minstrels sing songs. Then comes a sudden thunderstorm in which the Page disappears, recalled by his master, Michael Scott. The lords make a pilgrimage to Melrose to pray for the repose of the Wizard’s soul, and the “Lay” closes with the solemn *Dies Irae*.

It is not intended that the summary shall be dictated, or even read to the pupils. It may serve as a guide to the inexperienced teacher, as it contains the chief points that the pupils should gather for themselves. If this is the first story in verse that they have read, they will probably find it hard to grasp. In a small class, it may be found possible to give them some practice in reading shorter stories first.

“Rosabelle,” in Canto VI, “The Host’s Tale” or “Sir David Lindesay’s Tale” in “Marmion,” might be read in class, solely for the story. Or the pupils may beset some story poems to read at home and report upon. Tennyson’s “Dora,” parts, or the whole, of “Enoch Arden,” Longfellow’s “Falcon of Sir Federigo,” “Robert of Sicily,” “the Birds of Killingworth,” the Bell of Atri,” are all very easy reading.

After the “Lay” has been mastered, special marks might be offered for a good report on another one of Scott’s longer poems. If the student can be made to realize that he is gaining a distinct power, namely, the ability to grasp the story of a narrative poem, by the study of this one, it will add interest to the work.

By all means interest your class in the centennial anniversary of Waverley, published in July, 1814, a year of great historic events. Will the present troubled and exciting days produce any such literature? Certainly at this crisis, when our sense of nationality, and our recognition of heroic virtues are quickened, Scott’s novels are, more than ever, the best of reading. “They are pivoted,” says Mr. Hutton “on public, rather than mere private interests and passions. They give us an imaginative view, not of mere individuals, but of individuals as they are affected by the political strifes and social divisions of the age. Scott makes you open your eyes to all sorts of historic conditions to which you would otherwise be blind.”

EDUCATIONAL MEETINGS.

The Interprovincial Education Convention for the three Atlantic Provinces met in the Technical College, Halifax, on August 26th, 27th and 28th, with a very satisfactory attendance. The session opened on Wednesday morning with short welcoming speeches by Superintendent MacKay and Principal Sexton. Dr. Carter, Chief Superintendent of Education for New Brunswick, the presiding officer, gave the opening address.

The subjects dealt with were varied, but speaking generally, they had to do with the larger issues in the Educational world, and most of the papers and speeches were very informing, and of great interest. Besides the speakers engaged in Educational work in the Maritime Provinces, the Convention was addressed by Dr. James W. Robertson, C.M.G. of Ottawa, Dr. W. E. Fernald, Superintendent of the Massachusetts School for the Feeble Minded, and Mr. Harlan I. Smith, Archaeologist of the Geological Survey of Canada.

Dr. Robertson spoke at some length on Vocational, Industrial and Technical Education on Wednesday afternoon, and again at the public meeting that evening. His addresses were deeply stirring and impressive. He pleaded that "the great art of living" be not lost sight of, and for the right of every Canadian to learn to live a happy and useful life. He urged that the "three R's" should early be mastered as *arts*, the art of reading, the art of writing, of computing. To these should be added the art of drawing, and all taught as a means, not an end. Singing should be constantly used to induce a happy and impressionable mood. Dr. Robertson explained the Montessori method of teaching writing, and told of its successful use in Canadian schools.

Mr. Harlan Smith's most interesting lecture on the "Archaeology of Canada" suffered from being crowded into a very late hour of the evening, but was listened to with enjoyment. The lecturer's suggestions as to the use of museums were valuable and well timed, and should bear fruit in the schools.

On Thursday evening the Convention heard with absorbed attention the presentation of the case of the feeble minded, and their claims upon the state, by Dr. Fernald. Teachers would have been glad to hear fuller details of the lecturer's own work for this unfortunate class, but he devoted most of his time, no doubt wisely, to impressing upon his hearers the danger and cost that the

feeble minded bring upon the community, and the grave importance of secluding them, and giving them such work and such pleasure as lies within their grasp. One touching comment upon the picture of a decent-looking woman remains in the memory, and drives home the meaning of the whole lecture. "This woman had broken jail several times, and was brought to us in charge of four warders. She now spends all her time in caring most tenderly and lovingly for our little helpless children."

In the discussion upon Standardization of Secondary Education, Teachers Licenses, and School Statistics, and Uniformity of School books throughout Canada, and the advantage of a possible Dominion Education Bureau, all opinions were agreed as to the gain that would accrue if these were adopted. Papers on these subjects were read by Prof. Howard Murray of Dalhousie University, and by Superintendent MacKay. The former speaker showed that there is already a tendency towards uniform text books, in that some of the books selected and authorized by the Ontario Board of Education have been adopted in other provinces. A good point was made when one of the speakers urged the increased feeling of unity if school children all over Canada were trained in the same ideas and sentiments. The discussion on this subject, by Superintendent Campbell of Prince Edward Island, and Mr. S. A. Starratt, was cut all too short for want of time.

Whether the undergraduate college course should take three or four years engaged the attention of the presidents of Acadia, Dalhousie, St. Francis Xavier and the University of New Brunswick. The opinion seemed to be strongly in favour of the longer course, mainly because of the advantage of the increased maturity of the student. "In three years you may cram a boy with four years work, but you cannot give his mind four years' growth." Superintendent Carter made a very strong plea for the shorter course on economic grounds. Dr. H. S. Bridges thought that the question might be settled by the expedient of Senior Matriculation.

Dr. McDougall and Dr. Blackadder of Halifax, and Dr. Walker of Truro, gave practical addresses on Medical Inspection of Schools. The Cadet Movement was dealt with by Mr. Elliott, Secretary of the Canadian Defence League, and Mr. A. Stirling Macfarlane. A paper on the "Single Tax," written by Mrs. E. M. Murray, was read by Miss

Wynne. Principal Creelman, of Sydney, made a forcible speech, and put forth a definite suggestion on how to get teachers salaries' increased. He urged teachers to unite and to work definitely for this object, and not to expect results at once, but to keep at it. The discussion that followed did not keep to Mr. Creelman's point, but different speakers advanced their own ideas on the subject. A very lucid and informing paper was read by Dr. Soloan on Provincial Claims to Federal Subsidies for Education.

After Dr. Fernald's lecture on Thursday evening, refreshments were served by a committee of Halifax teachers.

The meetings were well attended throughout. A general criticism was that the programme was rather too full. Fewer good things could perhaps have been better digested. Many of the visiting teachers also, would have been glad of more opportunities to see some of the sights of beautiful Halifax, and such sight seeing might surely be considered educational.

THE SUMMER SCHOOL OF SCIENCE.

The Summer School of Science for the Atlantic Provinces held its twenty-eighth annual session in July. The School met this year in Charlottetown, in a united session with the Prince Edward Island Summer School, under the auspices of the P. E. I. Department of Agriculture. The enrolment was 518, much the largest on record. Three hundred and seventy-one students were from Prince Edward Island, and the other Maritime Provinces were well represented. Predominance was given to the study of Agriculture, the time table being so arranged that all first year students could take the entire course, and the courses in Science were planned to have a direct bearing on Agriculture and School Gardening. This arrangement was very advantageous to the Agriculture Students, but not so satisfactory to those interested in other subjects, which were crowded into the hours of the afternoon. Physical Drill also made taxing demands. Evening lectures were given by Miss Eleanor Robinson, Editor of the EDUCATIONAL REVIEW, upon the teaching of Literature; by Professor L. A. DeWolfe, of the Truro Normal School, on School Fairs; and by Professor Fernald of Harvard University on "Botanical Evidences of the Discovery of Vineland." The School

visited the Bunbury Farm, one of the finest farms in the Province, to see the extensive orchard and nurseries, the fox ranch, and the Karakull sheep.

The citizens of Charlottetown invited the students to a lawn party, which bad weather turned into a gathering in the college hall.

The interest in the work shown by both teachers and students was intense. "One could not ask" writes a correspondent "for greater enthusiasm or more faithful labour. Might one, however, suggest that most of the students tried to assimilate too much information. It would seem wise to follow the practice found necessary in other summer schools, and save the eager student from herself by uniting the number of courses she may elect. Greater power would follow from this concentration of effort, and in so brief a course, increase of mental power rather than acquisition of facts must be the reward. Difference of opinion on this point should not obscure the recognition of the spirit of earnestness shown by both instructors and students, nor the solid results of the session."

Through the generosity of the government of Prince Edward Island, all tuition was free. About thirty scholarships were awarded at the close of the school and a list of these, with the winners will be given in a future issue.

RURAL SCIENCE SCHOOLS.

The Rural Science School at Truro, closed its Summer session, August 6. The enrolment was 130. Of these, forty-nine completed the course, getting the Rural Science Diploma. Thirty-four obtained one year certificates. Twenty-five did not write any examinations, though some of them attended Science classes. This twenty-five belongs to the group who came for Physical Drill only.

The session was a very successful one. The students were of a very superior type, and entered into all activities heartily. We kept six gardens in operation. Three of these were on vacant lots in the town of Truro; two were on public school grounds, and one on the Normal College grounds. Each garden was under the management of a Rural Science student, whose duty it was to direct the work of her fellow-students or of school children in these gardens.

We held a model exhibition at which the students exhibited their collections of flowers, insects, pressed plants, domestic science and manual

training work. This exhibition will, doubtless, be imitated in many rural and town schools during the coming year.

With this experience in garden work and exhibitions, in addition to the regular class room, laboratory, and field work, the members of this summer session can scarcely fail to make their influence felt.

The first Summer School of Rural Science for New Brunswick was held at Woodstock, in the Vocational School Building, from July 8th to August 4th. The closing exercises were held on Tuesday evening, August 4th, in the Assembly Hall of the Fisher Memorial School, the Hon. James Murray presiding. Mr. R. P. Steeves, Director of Elementary Agricultural Education, gave a report of the work of the session. Seventy-five students were enrolled, sixty-six of whom took the examinations. Twenty-nine passed in the first division, and sixteen in the second division. Mr. Earle McPhee gave the valedictory, and at the close of his address moved a vote of thanks, which was unanimously carried, to Mr. Steeves for his painstaking and sympathetic supervision of the school. Brief addresses were given by the Chairman, by Chancellor Jones of the University of New Brunswick and by Mr. J. B. Daggett, and a musical programme was carried out. It was agreed that New Brunswick's first Rural Science School was a complete success.

NEW BRUNSWICK HIGH SCHOOL TEACHER'S ASSOCIATION.

It has long been felt that the teachers of New Brunswick should be organized to protect their interests. During the session of the Summer School of Rural Science, at Woodstock, the teachers present holding Superior or Grammar School licenses formed an association to be called the "New Brunswick High School Teacher's Association." All teachers holding Superior or Grammar School licenses are eligible for membership. It is not deemed advisable to enlarge the association by admitting teachers of other classes of licenses, as yet. The officers of the Association are President, Vice-President, and Secretary-Treasurer. These, with one Associate Secretary from each Inspectorate, comprise the executive.

The aim of the Association is to increase the

efficiency of teachers and by a united effort to place our profession on a par with other professions. Before the Association can prove effective, it must have as members the majority of teachers. Whether you are doing High School work or not, matters not. If you have a Superior or Grammar School license, send your name, and fee of \$1.00 to the Associate Secretary in your Inspectorate, or to the General Secretary. The Executive have been instructed to use this fee for advertising the Association, and for promoting its aims.

At the first regular meeting of the Association, the following officers were elected:

President, F. C. Squires, Woodstock, N. B.; Vice-President, Miss Zula Hallett, Marysville, N. B.; Secretary-Treasurer, E. D. MacPhee, Sackville, N. B. Associate Secretaries: Mr. Meagher's Inspectorate — J. H. Barnett, Hartland, N. B.; Mr. Mersereau's Inspectorate — L. R. Hetherington, Newcastle, N. B.; Mr. Hanson's Inspectorate — W. H. Elgee, Moore's Mills, N. B.; Mr. Brook's Inspectorate — H. C. Ricker, Kingston, N. B.; Mr. O'Blenes Inspectorate — J. C. Hanson, Riverside, N. B.

Associate Secretaries for the remaining Inspectorates will be appointed early in September.

Will not all teachers eligible for membership unite with the Association. Let us by a combined effort, elevate the teaching profession. Let us act as a body, and show the ratepayers of our province that we aim to increase our usefulness, and then we shall see better conditions for all members of the profession.

Arrangements are being made to report the work and discuss the aims of the Association each month in the EDUCATIONAL REVIEW, which will thus become the recognized means of communication between the members.

A schoolmaster once said to his pupils, to the boy who would make the best piece of composition in five minutes on "How to overcome Habit" he would give a prize. When the five minutes had expired a lad of nine years stood up and said: "Well, sir, habit is hard to overcome. If you take off the first letter it does not change 'a bit.' If you take off another letter you will have a 'bit' left. If you take off still another, the whole of 'it' remains. If you take off another it is totally used up, all of which goes to show that if you want to get rid of habit you must throw it off altogether."

HOW TO MAKE A RELIEF MAP.

TO THE EDITOR OF THE EDUCATIONAL REVIEW:

I have been asked by Mr. Tibert, President of the Teachers' Institute for Inspectorate No. 4, Nova Scotia, to give in the *EDUCATIONAL REVIEW*, some information in regard to a relief map shown at a recent session of the Institute held in Weymouth. This map, used in teaching a lesson on the geography of the Bay of Fundy, was made of plasticine laid upon a ground of dark gray cardboard. It measured 30 in. x 40 in., and included that part of North America extending from Cape Cod on the south to the Peninsula of Gaspé on the north; and from the western limits of New Brunswick to the most easterly point of Cape Breton.

The dark gray-blue paper was left uncovered to represent water; the United States territory was built up from red plasticine, and the Canadian, including Nova Scotia, New Brunswick, Prince Edward Island and part of Quebec, from the light gray. The quantity of plasticine used for this map was one-half package of red and one and a half packages of gray. For convenience of carrying, the cardboard was divided into four strips and the part to represent land on each strip was built up separately. These pieces were afterward glued to a piece of strong factory cotton, making a map which might be folded without serious injury and, since plasticine dries very slowly and may be softened by the application of a little vaseline, any slight injury might easily be rectified.

The shaping of mountains and the building up of the higher lands requires some thought, but a general idea of elevation may be got from the ordinary school geographies, and much more may be learned by observing the courses taken by the rivers.

Plasticine is easily moulded with the fingers, but a pointed knife is helpful in making the outlines of the coast.

After all the plasticine had been laid on, I marked out the course of the rivers and made hollows in the plasticine for the lakes. For this part of the work a bit of wire or a woman's ever-ready hairpin proves quite satisfactory. Colored crayons, by careful manipulation, may be made to supply any further color needed for towns, boundaries, railroads, etc.

The total cost of a map, such as I have described,

is about \$1.30, and five good evenings' work is needed to complete it.

Before making this map, I made one of Nova Scotia, measuring $2\frac{1}{2}$ ft. from western Nova Scotia to eastern Cape Breton. One package of plasticine was used in this.

In my own school room, I have found these maps very useful in teaching the rudiments of physical and commercial geography.

Perhaps some one may think of other materials which might be used for making relief maps. At the Normal College, Truro, I saw one prepared by two pupils of the college from a sort of papier-maché, material made from newspapers reduced by long boiling, to a pulp and mixed with paste. I, myself, last year tried ordinary red clay for map-making, and found it troublesome to handle. If one preferred it, the white clay used for modelling might be used, but I conclude, after trying vainly to get it in Halifax and St. John, that it is kept only in the larger centres.

Failing to get white clay, I wrote to Miss Smith, teacher of drawing in the Nova Scotia Normal College, who kindly recommended plasticine as the most practical material. This also I found, after some trouble, was not kept in Halifax or in St. John. I obtained it from the Geo. M. Hendry Co., 215 Victoria St., Toronto. It is made in six colors; red, yellow, blue, green, gray and white. It comes in boxes of assorted colors, or in 1 lb. packages at 30 cents, postage extra.

Further information in regard to materials for modelling may be got by writing to the Geo. M. Hendry Co., supervision of Miss Johnson.

Annapolis Royal, S. E. PRIMROSE ELLIOTT
May 2, 1914.

AN M. P'S ANECDOTES.

Many good stories were told by Dr. Macnamara, M.P., recently, when he gave some of his "Reminiscences and Reflections" at the Herne Hill Congregational Church, London.

Among the unconscious witticisms of children (for which he did not vouch) he narrated that a small boy defined "Mediator" as "a chap who says hit me instead." Another boy, whose home lesson sums were all wrong, told his teacher, "I knew they would be; father would help me." An alleged answer to the question, "What does 'etc.' mean?" was, "A sign to make believe you know more than you do."—*Exchange*.

A WAR POEM.

Thou careless, awake!
 Thou peacemaker, fight!
 Stand England for honor
 And God guard the right.

Thy mirth lay aside,
 Thy cavil and play,
 The foe is upon thee
 And grave is the day.

The monarch Ambition
 Has harnessed his slaves,
 But the folk of the ocean
 Are free as the waves.

For peace thou art armed,
 Thy freedom to hold,
 Thy courage as iron,
 Thy good faith as gold.

Through fire, air and water
 Thy trial must be,
 But they that love life best
 Die gladly for thee.

The love of their mothers
 Is strong to command,
 The fame of their fathers
 Is might to their hand.

Much suffering shall cleanse thee,
 But thou through the flood
 Shall win to salvation
 To beauty through blood.

Up, careless! Awake!
 Ye peacemakers, fight!
 England stands for honor,
 God defend the right.

— Dr. Robert Bridges
 (Poet Laureate.)

WHO'S TO BLAME?

The College President:
 Such rawness in a student is a shame,
 But lack of preparation is to blame.

The High School Principal:
 Good Heavens! What crudity! The boy's a fool;
 The fault, of course, is with the grammar school.

The Grammar Principal:
 Would that from such a dunce I might be spared!
 They send them up to me so unprepared.

The Primary Teacher:
 Poor Kindergarten blockhead! And they call
 That "Preparation!" Worse than none at all.

The Kindergarten teacher:
 Never such lack of training did I see!
 What sort of person can the mother be?

The Mother:
 You stupid child! But then, you're not to blame;
 Your father's family are all the same.

— *Selected.*

SHOW THE WAY, ENGLAND.

Show the way, England!
 Not in the bright hour
 But in the dark hour
 When the world threatens.
 We are your sons —
 Not for the might of you,
 Shelter and right of you —
 Not for the paid-coin,
 Not for your guns,
 But that we love you,
 Sucked at the breast of you,
 You are our Mother,
 We are your sons.

Show the way, England!
 And in the fated
 Din of the battle
 Stand you alone?
 Loyal Canadians,
 Sons of the sons of you,
 Back of the guns of you
 Bone of your bone,
 We will stand four square.
 Rock of the rock of you,
 Ribs of the steel of you,
 Let the world thunder;
 Ere you go under
 We will follow you,
 Might of your might.

Show the way, England!
 Let that grim master
 Of earth's dread disaster
 But darken your sun,
 Trust your child — Canada,
 She will be with you
 Shoulder to shoulder,
 Gun to your gun,
 She will reply with you;
 Fight for you,
 Die for you,
 So, wide to the world
 Be the old flag unfurled,
 Show the way, England!

— *Wilfred Campbell.*

"Self is the only prison that can ever bind the soul;
 Love is the only angel who can bid the gates unroll;
 And when He comes to call thee, arise, and follow fast;
 His way may lead through darkness, but it leads to light at
 last."
 — *Van Dyke.*

[For the REVIEW.]

OPENING EXERCISES for PRIMARY SCHOOLS

The first twenty minutes of the school day seem to me most important ones. The children are fresh and full of outside interests, and it is then that the observing teacher can get a glimpse into the real nature of the child, and note the things that interest and appeal to him.

After the opening hymn, it has been my custom to have the children repeat the Lord's Prayer. It is seemly that they all assume the same attitude and that the prayer be repeated with becoming reverence. I have followed the plan of placing a suitable verse of scripture on the blackboard. The Golden Rule as found in St. Matt. 7:12 is a good one to begin with. Several children may repeat this verse after the prayer. If it remains on the board for several days, it will be memorized by most of the children.

This plan may be varied by reading or repeating a whole passage appropriate to a particular season; as, a Thanksgiving Psalm for the months of October and November, and the Christmas story for December, as told in St. Luke 2:8-14.

As in all school work, it is necessary to have a plan or outline of the subjects to be taken up in the morning talks. Every morning, have something specially planned to bring before the children; such subjects as, the weather, winds, direction, nature topics, duties and attitude of the children toward each other, and kindness to animals, lend themselves to this purpose.

Have the subject matter planned for some time ahead, but often allow the immediate interest to furnish the subject for the day. For instance:—One April morning a whole flock of fox sparrows arrived in our school yard. We all saw them. We had but to stand in the windows and keep very quiet to watch them as long as we pleased, scratching in the dead leaves. Of course we talked of fox sparrows that morning. Another morning, in May, two small boys appeared, bearing with pride some fine specimens of Jack-in-the-pulpit. My scrap-book furnished this verse,—

"In a pulpit of green
Every year may be seen
A qucer little preacher named Jack,
He's a man of few words,
But the flowers and the birds
Come in crowds to welcome him back."

which we learned with appreciation. We left the "Jacks" in water for several days, when one

small boy discovered "green berries" growing inside one of the flowers. We talked about this and then memorized the following verse,—

"Jack-in-the-Pulpit preaches to-day,
Tomorrow the pulpit is faded away.
Come back to see Jack when September is nigh,
And a bunch of red berries is all you will spy."

Often our drawing, writing or composition exercises later in the day grow out of these morning talks. For example: Grade II may copy the verse on Jack-in-the-pulpit as an exercise in writing. This same class may write a story about the fox sparrow in the composition period or answer simple questions on the verse written, as,—

To whom does Jack preach?
Who plays the organ?
Who sings in the choir? etc.

Some incident of the play-ground or some complaint of a play-mate furnishes the occasion to teach kindness and consideration for others. This may be accomplished by means of a story and it is seldom necessary to point the moral. Children are particularly apt in that.

I like the plan of selecting the subject matter for morning talks by months. Each month teems with things we want to know about. Let us take the month of September. In the first Primary, the children have just entered school—forty-odd little embryo men and women with as many different conceptions of school and teacher. Some of these have been gathered from the talk of older brothers, sisters or play-mates; other alas! come from the remarks of injudicious elders, and the ideas of wilful disobedience and revengeful punishment are often given a prominent place. For the first few days, try to make the morning talks a link between home and school. Try to gain the confidence of the child. It means everything in the year to come.

This little finger-play always appeals to children just beginning school,—

(Hold up thumb, then each finger in succession.)

Little Tommy Thumbkins
Went to school to-day

(Hold up thumb.)

Sister Rose went with him
Showing him the way

(Hold up first finger.)

Mother in the doorway
Waved her hand good-bye
Little brother left at home
Then began to cry

Baby creeping on the floor
Tried to say "Bye-bye."

SOME DEVICES FOR PRIMARY WORK.

See! she has laid out her programme for the day. She is to teach the phonic "h" the first thing in the morning. As the class leaves the board, they find on their desks a small white or brown paper with a large "h" written on it (made with a paint brush dipped in ink). This they cover with split peas. Every stroke they make in placing the peas is fixing the form of that "h" in their baby memories, beside the invaluable lessons of neatness and accuracy in placing.

They have nothing to invent. Fifteen minutes of the teacher's time have provided the invention. Later in the day, comes a neat little paper, with a column of ink-written letter "h's." With each paper is distributed a piece of ordinary tissue paper. They trace through the columns, making possibly three or four, as time permits. Here they are seeing the morning lesson "h" in a smaller form, but the work still requiring no great brain activity, and yet every tracing impressing indelibly that little "h."

Such delight to take that tissue paper home to mamma!

In the afternoon, when the little heads are heavy and all doors to a lowest primary grade should be closed, but can not, because the clock still says only three—then comes a beautiful gift. Each little tot finds in his hands a big, black-headed pin, a little oblong paper with their friend "h," in a red pencil line, and they at once see who can prick the neatest, closest, most even little line of holes.—*Selected.*

AN ARITHMETIC DEVICE.

Constant drill on number combinations is necessary in the primary grades, and a teacher must be very inventive if she wishes to keep the work from growing monotonous and uninteresting to the children. Anything in the way of competition usually appeals to the little ones, and the following device keeps the interest at white heat: Arrange a line of sums from left to right low down on the board. Have from twenty to thirty simple examples in addition, subtraction or multiplication numbered from 1 to the end. Let one child begin at number one and work toward number 20; while another child begins at number 20 and works toward 1. Whoever passes number 10 first has of course won the game. Always count accuracy before rapidity and commend the child who has finished

9 correctly, rather than the one who has finished 11 with mistakes.—*Selected.*

SIMPLE EXERCISES FOR RESTLESS LITTLE ONES.

On rainy and dull days the little ones grow very tired and restless. The following are a few simple exercises that will give them opportunity for activity and which they will all enjoy.

Before the class stands, the teacher should tell them that they must all pretend they are trees. This will appeal to the little ones, who are usually fond of impersonations. As they all want to be beautiful trees, they must be straight. To be straight they must stand with heels together, hands close to the sides, and heads up. The teacher should then direct the class to stand.

The lesson will now continue as follows:—

Teacher—"The first tree we are going to be is the poplar. It has a straight trunk like this. (Go to the board and draw a straight line.) Its branches curve upward and are close to the trunk. (Draw branches on the tree trunk.) Watch carefully what I do and say, and then do it with me."

(1) "First, I raise my arms up high."

(Teacher raises arms straight upward, keeping them close to head.)

"I am a poplar reaching to the sky." (Hands down.)

Teacher and pupils now recite the verse together, executing the exercise. The pupils continue the exercise while the teacher counts 1, 2—1, 2—1, 2, etc.

The teacher should now tell the class something about the oak tree,—its beauty, strength and use as a shade tree. The second exercise is then done by the teacher, the pupils watching as before.

(2) "Now I raise them to the side;"

(Teacher raises arms shoulder high.)

"I am an oak, with branches stretching wide."

(Arms lower.)

The teacher and pupils then repeat the verse together. The pupils may continue the exercise to the count of 1, 2, as before.

The two remaining exercises are done in the same way.

(3) "Now there comes a little breeze

That only turns the heads of trees."

Turn the head to side and turn back; count 1, 2.

(4) "Next I bend my body down

(Bend the body.)

The wind is blowing all around.
(Raise the body again; count 1, 2.

—*The Teacher, Philadelphia.*

For copy work have the name of the month written on the board; opposite the name write the name of a holiday occurring in the month, or a child's name whose birthday comes in that month. Under this write number of days in month.

On the last day of the month have a weather report blank drawn for the following month. Insist on these reports being kept in a book, and on their being properly filled out.

Reflect that this empire has been acquired by men who knew their duty and had the courage to do it, who in the hour of conflict had the fear of dishonour always present to them. — *Thucydides.*

The whole earth is the sepulchre of famous men: not only are they commemorated by columns and inscriptions in their own country, but in foreign lands there dwells also an unwritten memorial of them, graven not on stone, but in the hearts of men. Make them your examples, and esteeming courage to be freedom and freedom to be happiness, do not weigh too nicely the perils of war. — *Thucydides.*

Castilian Gentlemen!

Choose not their task; they choose to do it well. — *George Eliot.*

To every season is its own peculiar beauty given,
In every age of mortal men we see the hand of Heaven;
And century to century utters a glorious speech,
And peace to war, and war to peace, eternal lessons teach.
So God doth mould as pleaseth Him, the nations of His choice.

Now in the battle cry is heard His purifying voice.

—*John Reade*

The blood of man should never be shed but to redeem the blood of man; it is well shed for our family, for our friends, for our God, for our country, for our kind — the rest is vanity, the rest is crime. — *Edmund Burke.*

Nor discipline nor valour can withstand
The shock, nor quell the inevitable rout
When in some great extremity breaks out,
A people, on their own beloved land
Risen, like one man, to combat in the sight
Of a just God, for liberty and right. — *Wordsworth.*

O, waken all,
Whate'er your temper, at your country's call;
Resolving (this a freeborn nation can)
To have one soul, and perish to a man,
Or save this honoured land. — *Wordsworth.*

War causes an incalculable amount of avoidable human suffering, and it ought to cease among Christian nations. But, on the other hand, I know certainly that the most beautiful characters yet developed among men have been formed in war; and that all great nations have been warrior nations. — *John Ruskin.*

Under heaviest sorrow earth can bring,
If from the affliction somewhere do not grow
Honour which could not else have been, a faith
An elevation, and a sanctity,
If new strength be not given, nor old restored
The blame is ours. — *Wordsworth.*

THE ST. JOHN BUSINESS COLLEGE.

The managers of the St. John Business College have issued a handsome booklet giving full information about their courses of study, with illustrations showing their new quarters. The college has entered upon its forty-seventh year, and its reputation as an institution giving a thoroughly sound business education has long been established. The Carnegie Foundation report on College Catalogues says, "the college as an educational agent may fairly be judged by the character of the catalogue that it issues, taking into account its literary form, its honesty, its accuracy, and the clearness and completeness with which its information is presented." In all these points, this new catalogue testifies to the high standing of the St. John Business College, and if we knew nothing else of the institution the catalogue alone would predispose us in its favour. As it is, our knowledge of the conscientious work done by its teachers, the admirable tone in the classrooms, the value of its diploma, and the success achieved in the business world by its students is all borne out by the many hearty testimonials coming from different parts of Canada and the United States. We wish the institution continued success, and most cordially recommend it to any of our readers who are thinking of a business course.

The September war number of the Canadian Pictorial is most attractive and interesting. Among other objects of special interest just now it shows the flags of all the European nations. Teachers who wish to illustrate schoolroom talks on the war can hardly do better than send ten cents to the John Dougall & Son, Montreal, for this number, with an inquiry about their special offer.

Brussels, August 8, 57 B. C. (Delayed in transmission)
. . . 'Horum omnium fortissimi sunt Belgae . . .
proximique sunt Germanis, qui trans Rhenum incolunt,
quibuscum continenter bellum gerunt.'—C. J. Caesar.—*New York Evening Sun.*

St. Petersburg, the capital of Russia, more correctly called Petersburg, was named in honour of its founder, Peter the Great. The Russians have now changed the name, because it was German in form; and the city will hereafter be known as Petrograd.

CURRENT EVENTS.

A month of the war in Europe, with millions of men under arms, has brought swift movements of immense armies, and greater battles than the world has ever seen before, but no decisive results. The German armies have swept through Belgium, and now occupy the greater part of that country and the north of France; while the Russians have entered Galicia and taken possession of a wide strip of Austrian territory, and also occupy a great part of East Prussia and are pressing on towards Berlin. The war, which will, perhaps, be known in history as the Great War, is not confined to Europe. True to her alliance with the British Empire, Japan has declared war against Germany, and will protect British interests in the Far Eastern waters. She also promises to take the German province of Kiau-Chau and restore it to China; but will not at present send her ships into other seas. And wherever there are other German colonies they are open to attack by British ships; for, very literally, when the British Empire is at war all the ends of the earth are at war. A New Zealand expedition has captured the German colony at Samoa, and other German possessions in the South Pacific will probably be taken. The German province of Togoland, on the coast of the Gulf of Guinea, has been practically annexed to British West Africa. This, however, does not mean that the conquered territories will become permanent possessions of the conquerors. The ownership remains to be adjusted at the close of the war.

The first remarkable event of the war was the heroic defence of Liege (lee-ayzh) by the Belgians, which delayed the German advance for a time, while the French and British troops were preparing to meet the invaders. The Belgian resistance was at length overcome, and the enormous masses of German troops have been steadily pressing back the allies; yet the retreating armies are unbroken, and every day brings nearer the still greater armies of Russia, which, sooner or later, the Germans must meet in force. It remains to be seen whether they can conquer France and then turn to meet the Russians.

The British navy has been able to protect the routes of trade. In the few scattered encounters with German ships, the British and French ships have been always victorious, but no great naval battle has yet been fought.

Brussels being occupied by the Germans, and Paris threatened, Antwerp has been made the capital of Belgium, and the seat of government in France has been moved to Bordeaux.

The Mexican war is not yet quite settled, though it may very well be forgotten. Gen. Carranza is in power in the capital, but there have been uprisings against his rule in several places.

The opening of the Cape Cod Canal, on the twenty-ninth of July, has made available for vessels of light draft a new waterway by which they save a distance of seventy miles in coastal navigation and avoid the dangerous shores of the cape.

Pope Pius X died on the twentieth of August. It is said that grief over the outbreak of the European war hastened his end. No one who ever filled his high office won more than he the respect and affection of the world at large, and

he is generally regarded as a martyr of the war. An Italian cardinal has been chosen as his successor, and has taken the name of Benedict XV.

A special session of the Dominion Parliament has been held to pass the necessary legislation for war expenditures and other measures connected with a state of war. Sir Robert Borden announced that the term of office of His Royal Highness the Governor-General has been extended indefinitely, so that Canada may have the benefit of his advice and experience during the continuance of the war.

SCHOOL AND COLLEGE.

The course of instruction for teachers seeking to qualify as instructors of cadet corps, which was going on in Fredericton, was brought to a sudden close by the outbreak of war, a week before the date set for its completion, as the instructors received orders to join their company at St. John.

During the past year through the efforts of the teacher Miss Margaret McNabb a Union Jack has been purchased — a flag pole put up — and single seats and desks at a cost of one hundred dollars have been placed in the schoolhouse at St. Croix, York Co.

In the Empire Day Essay Competition this year, the Lord Meath Empire Day Challenge Cup and League of the Empire personal prize of five guineas, for all pupils of the Empire between the ages of fourteen and twenty, was won by George Cooling, Boys' Grammar School, Brisbane, Queensland. The Lord Meath Empire Day Challenge Cup and League of the Empire personal prize of three guineas, for all pupils of the Empire under fourteen years of age, was won by Walter McGregor Albury, Boys' Central School, Nassau, Bahamas. Essays were received from England, Scotland, Ontario, Nova Scotia, Manitoba, Alberta, Saskatchewan, Newfoundland, New South Wales, South Australia, Victoria, Queensland, New Zealand, Cape Province, Natal, Orange Free State, Bechuanaland, Bengal, Madras, Central Provinces, Jamaica, Barbadoes, Straits Settlements, Gibraltar, British Guiana, Gold Coast Colony, and the Bahamas.

In the Milltown, N. B. Schools one new teacher is added to the staff to succeed Miss Ryder, who has resigned, namely Miss Boyd of Fredericton. Miss Thompson, who taught grade seven, will teach grade four, Miss Grace Coughlin taking grade seven. Miss Boyd will take charge of grade eight. The high school will open on Monday with Mr. Denham, the former principal, in charge.

Miss Laurestine Bailey, daughter of Dr. L. W. Bailey of Fredericton, has been appointed head of the art department of Acadia Ladies' Seminary, Wolfville.

The Centennial School, St. John, loses a valued member of its staff by the resignation of Miss Annie M. Hea.

It is said that ninety per cent of the undergraduates of Oxford University are Territorials. Among the Canadian Rhodes Scholars who have volunteered for active service are Mr. Arthur Carter, of the University of New Brunswick, and Mr. A. L. Collett, of Kings College.

Miss Leah Stickle of Fredericton will teach in Campbellton this term.

New Brunswick School Calendar, 1914-15.

1914. FIRST TERM.
 Thanksgiving Day (Public Holiday).
To be appointed by government.
 Dec. 15.—Examinations for Class III License begin.
 Dec. 18.—Normal and Public Schools close for Christmas Vacation.
 1915. SECOND TERM.
 Jan. 4.—Normal and Public Schools open.
 Apr. 1.—Schools close for Easter Vacation.
 Apr. 7.—Schools re-open after Easter Vacation.
 May 18.—Loyalist Day (Holiday for St. John City only).

May 23.—Empire Day (Observe May 21st).
 May 24.—Victoria Day (Public Holiday).
 May 24.—Last Day on which Inspectors are authorized to receive applications for Departmental Examinations. Reg 38-6.
 May 25.—Examinations for Class III License begin.
 June 3.—King's Birthday (Public Holiday).
 June 4.—Normal School Closing.
 June 8.—Final Examinations for License begin.
 June 21.—High School Entrance Examinations begin.
 June 30.—Public Schools close for Year.

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BOOK NOTICES.

Bird Lore for July-August is a delightful number, full of illustrations and interesting articles. The report of the Audubon societies is most encouraging. The generous patron, who insists on remaining anonymous, has given this year, the sum of \$20,000 towards the expenses. This enables the Junior Audubon Class to enroll members and provide pictures and much valuable instruction, for the nominal fee of ten cents. Over 95,000 school children now belong to these classes and over 3,600 of these are Canadians. Teachers who want to interest their pupils in birds should write for particulars.

We can hardly speak too highly of *The Children's Cameos of Poetry and Prose*. We wish that our boards of education, would prescribe them for use and supply them to the children. Failing that, every teacher should have the book or books suited to her grades upon her desk, for supplementary reading. There are eight little volumes, excellently graded. Book I has fifty-one selections, from many different writers, all suited to very little people. The choice of selections is admirable and includes some that will be new to many readers, as well as old favourites. The large type and generous spacing make the books attractive and the price brings them within everybody's reach. George Philip & Sons, 32 Fleet Street, London. Books I-IV, paper 3d., cloth 4d.; V-VIII, paper 4d., cloth 5d.]

Teachers who wish to get a new and trustworthy map of the Maritime Provinces for their schools are advised to write to Mr. F. C. C. Lynch, Superintendent of Railway Lands Branch, Department of the interior, Ottawa. This department is preparing sectional maps of the Dominion to show the location of the various Canadians chartered banks. Railways appear prominently in these maps and they are of considerable interest and value. The sheet covering the Maritime Provinces is now ready for free distribution.

Mr. LAURENCE KETTLE, as quoted by The Irish Volunteer and re-quoted by The Dublin Evening Mail (and they may share the glory between them):—

"Those gentleman of the army could be described by the poet Milton as the Oiled and Curley Assyrian wolves."

However, it is no good going to the Zoo to look for these in the Wolf House. Stay at home quietly and read "Maud" and "The Destruction of Sen-nacherib," and then you will understand how Milton would have plagiarised Tennyson and Byron in one line if he had only lived long enough.
 — *Punch*.

OFFICIAL NOTICES.

The attention of teachers is directed to the Nature Study and Agriculture Course as per school register.

Those schools not already supplied with the Nature Study and Agriculture Course may obtain them by applying to the Inspectors.

These courses are not the property of the teachers, but of the schools, and must be kept in the registers and left for succeeding teachers.

W. S. CARTER,
 Chief Superintendent Education.

Education Office, September 3, 1914.

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THE EDUCATIONAL REVIEW,
St. John, N. B.

We hope to get many letters in answer to the "Who, When, and Where" questions on page 92. The correct answers will be given in the November issue.

Many teachers will no doubt be glad to have a picture of the King to hang in their schoolrooms at this time, and we are presenting one as a supplement with this issue.

Now is a good time to see that the National Anthem is sung with due reverence and intelligence. "The King — I do feel vexed for he," said an old farm laborer in England, speaking of the war; and

indeed a heavy burden of anxiety and sorrow must rest upon the "man who serveth men by right of birth." "God save the King" should be more than a mere form of words.

The war is of course a daily topic in the school-room, and the responsibility for the tone in which it is discussed lies with the teacher. Discourage all tendency to boastfulness, vainglory, hatred, or desire for revenge. Not so should the children of a great nation look upon the awful task which that nation has undertaken. Nobler feelings will rise in response to teaching in the spirit of Henry Newbolt's words:

"The Sea-Kings loved not boasting, they cursed not him
that cursed
They honoured all men duly, and him that faced them
first;
They strove and knew not hatred, they smote and toiled to
save,
They tended whom they vanquished, they praised the fallen
brave."

With the thought of the harvest fields laid waste in France and Belgium will come deeper thankfulness for our own plentiful harvests, peacefully gathered in. There is special cause, too, for thanksgiving in that we have both the will and the power to give of our abundance to the suffering people of those countries.

There is a duty upon non-combatants as high as any duty in this war; and that is that we do not allow ourselves to suffer any spiritual defeat, whatever the national issue may be. In that way we shall fight for England, the England of our souls, against the baser part of ourselves, even though we are not fighting against the enemy. Hatred is the easiest and the most worthless part of patriotism; it is the stimulant by which the coward persuades himself that he is brave; and the worse he thinks of his enemy the more he will fear him in his disaster. The brave man knows that his task is to defeat the enemy, not to hate him, and he knows, too, that those who hate cannot understand.—*The Times*.

NATURE-STUDY OF ANIMALS.

H. G. PERRY.

[ERRATA We regret the occurrence of the mistakes indicated below in Professor Perry's article in the September REVIEW. P. 58 for "H. E. Perry" read "H. G. Perry." P. 58, l. 21, and elsewhere where the word occurs for "neutral" read "ventral". P. 59, l. 20, for "knob" read "knot." P. 60, l. 10, for "progency" read "progeny." P. 58, Fig. 1, the cut is placed upside down, as inspection of the letters will show.]

Meadows, gardens, orchards, woods, ponds and streams abound with insect life at this time of year, and each supplies a good variety for nature-study work.

Among other forms the large green sphinx caterpillars are found along roads and foot paths, the stout polyphemus larva in similar situations and near dwellings, the tussock-moth larva, with its brush-like tufts on its first four abdominal segments, on our shrubbery, and the cabbage butterfly larva (cabbage-worm) on its favorite food plants. These and similar forms should be collected and placed in suitable cages with food for further development. All cages for insects that burrow in the ground in their resting stage should be supplied with three or four inches of loose damp earth.

When collecting cabbage-worms note its butterfly as it flits gaily over nasturtium, cabbage, or turnips. What is it doing? Search the leaves for eggs. They are small, elongated and yellow in color, and always placed singly and on end. Capture some of these butterflies, and spread and dry according to directions to be found in any good insect book, and afterwards keep in an insect box. An empty cigar box, with a suitable bottom for pinning specimens to, answers this purpose very well. Preserve several specimens of each kind of larva you find in 90% alcohol, or 4% formalin.

Watch for changes in the cages, and keep records. If the sphinx larva is nowhere to be seen some morning, do not be anxious; wait a few days and then carefully dig up the mud; a surprise is in store for you. Note how different the resting stage of this larva is from that of other larvae. Which does it more closely resemble—that of the cabbage butterfly or the polyphemus?

Sphinx caterpillars are often found with the body adorned with little projecting bodies, like those in Fig. 1. These protruding portions are not eggs, but the cocoons of a little four-winged

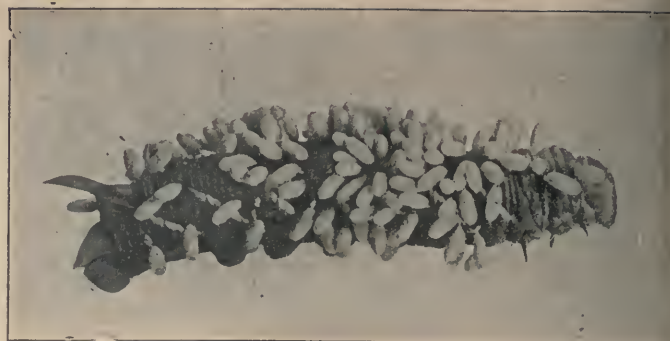


Fig. 1. Sphinx caterpillar with cocoons of bracoid parasites.

fly, that somewhat earlier stung the larva and left eggs in its flesh. These eggs soon hatched and the larvae of the fly fed upon the tissues and juices of the sphinx, and then in due time passed into the resting forms we now have before us. Such, in brief, is the wonderful life history of this little fly.

When one animal lives upon another in this or in a similar way it is said to be a parasite, while the one upon which the parasite lives is called the host. These terms are also applied to plants. Name several parasitic animals and the host of each. What is the general effect of parasites upon hosts, e. g. ticks on sheep, and lice on poultry, etc., etc? Keep several parasitized larvae sphinx and note the effect on this particular host.

Fig. 2, shows the winged form of a similar insect which is parasitic upon the tent caterpillar.



Fig. 2. Limneria, an ichneumon parasite of the tent caterpillar. (Twice natural size)

As these flies are four-winged forms, they are not true flies, diptera, but belong to a family called ichneumon-flies. The small ichneumon-flies have of late years been called braconid-flies. The sphinx parasite is a braconid-fly.

Several braconid-flies are parasitic upon plant lice, aphids. Search for aphids and collect them from a variety of plants, as lamb's quarters, nasturtium, fruit trees, hop vines, and from garden plants on which they are often found in abundance. Take them upon pieces of plants placed in fruit jars to school for study. How many kinds can you find? Note that there are usually winged and wingless forms in each kind. On alder twigs you will find a white woolly species; examine them closely.

Make yourself familiar with their interesting life history as told in any good work on zoology. (*Life Histories of American Insects*, "Weed, Macmillan Company, is especially good as a teacher's book.)

Examine aphids under a hand lens, and note their markings, and the projecting tubes or cornicles from the posterior and dorsal region of the abdomen. What insect is usually found associated with aphids? Ants are attracted by a sweet secretion from these little animals called honeydew, but the ladybird beetle and its larva are there for other reasons. For what reason?

Isolate a few aphids with the ladybird and its larva, count them every day, and you will find your answer.



Fig. 3. Dead green aphids, showing holes from which parasites emerge. (Much enlarged)

Look for parasitized aphids; they are readily distinguished by their enlarged abdomen and lighter color. Keep several in a well covered fruit jar, and in a few days the small flies will appear. Where did the flies come from? Examine the aphids closely for your answer.

See Fig. 3 for braconid parasites and aphid hosts.

A similar little four-winged form, the chalcis-fly, is parasitic on the cabbage-worm and many other injurious insects. A single chrysalis of the cabbage-worm will often yield dozens of these little flies.

The parasitic forms mentioned are among our most beneficial insects, since they tend to keep in check many injurious forms. Here are subjects for composition exercises, which can easily have some basis in personal observation.

These parasitic forms, along with wasps, bees, and ants, belong to the order hymenoptera.

Observing proper care, capture several wasps and bees in glass tumblers, and carefully cover and use for school purposes. Note that they have four wings, all of the same texture, and that in flying they are not used separately but are joined together on each side. The wings are held together by small hooks which may be seen when enlarged under the microscope. Look for them. Are the hooks on the fore, or the hind wing?

In a study of wasps we may roughly divide them into two groups,—the solitary wasps, which live alone, and use mud in building their nests, and the social wasps, which live in communities, and build their nests of wood pulp, paper, which they prepare by chewing shreds of weathered wood, collected from buildings, fences and stumps, and mixing with it a gelatinous secretion to make it tenacious and waterproof.

Solitary wasps are known as miners, carpenters, or masons, according as they respectively make their nests in tunnels in the earth, in excavated cavities in wood, or locate them in suitable places around the walls of buildings, fences, etc.

The masons or mud-daubers are common. Search for their nests, open them, and examine the contents. These nests are provisioned with paralyzed spiders. The mother wasp seems to know that her baby wasp thrives best on fresh living food, and she possesses the secret art by stinging her victims just enough in a certain ganglion to paralyze without killing them, so that they remain alive till devoured by the young larva. After filling the nest with such food, she deposits an egg, then seals up the mud house and departs, giving no further attention to the young.

Social wasps live in colonies containing females,

males, and workers, the latter being undeveloped females. They do not leave their young to live upon stored food, but give them constant care.

Our two most common social wasps are the white-faced wasp or hornet, and the yellow-jackets. These forms and their nests are well known to all country boys.

Procure an empty nest and use it as a subject for a lesson. In fact it is a good introduction to the study of wasps. Note its general shape, means of attachment, position of the entrance, and composition. Test the waterproofing of the paper. Wasps were the first paper makers, and man no doubt obtained initial hints for paper manufacture from these little creatures. Remove one side of the nest so as to expose the several sections of comb, and ask your pupils to diagram the nest, showing its internal structure, and also use it as a subject for descriptive composition.

One may learn many interesting things about wasps by procuring an occupied nest and watching them at their work. The nest is easily taken on cool evenings. As a special precaution plug the entrance with cotton before cutting the twig to which the nest is attached. Next place it in an upright position in a glass covered box, arranged in a window so as to allow the wasps freedom to come and go with their supplies. But such an experiment is obviously better fitted for private study than for school work.

Expose a dish of honey or molasses outside the window, and note for a day or two the visiting insects. Do wasps like sweets? They are also fond of various insects, the white-faced wasp being an inveterate fly catcher.

Of the other two well known families of the hymenoptera, bees and ants, and of their great social development we hope to write something at some future time. In closing we commend to all the great open book of nature,—study nature more than books.

[The cuts in this article are copied from *Elementary Entomology* through the kindness of the publishers, Ginn & Company, Boston, Mass.]

I really think my sister May Is stupider than me,
Because she said the other day There wasn't any "b"

In honeycomb, and spelt it just

C-double o-m-e!

Of course she's wrong; I told her so!

There's got to be a "bee"

Somewhere in honeycomb, because

He makes it: don't you see!

—Our Little One

CENTENNIAL ANNIVERSARIES OF THE WAR OF 1812

J. VROOM.

XXVI.—The Close of the War on the Niagara Frontier.

November 5.—The battle of Lundy's Lane was followed by the siege of Fort Erie. The fort had been enlarged and strengthened by the invaders; and when the British troops attempted in August to take it by assault they were repulsed with heavy loss. A month later, on the seventeenth of September, Brown ordered a sortie from the fort to drive the British from their line of batteries. There was a fierce struggle all along the line, with the results for a time in his favour; but in the end his whole force was driven back by the British, the losses on both sides being very heavy. A few days later, General Drummond raised the siege, falling back a short distance and establishing his headquarters at Niagara Falls.

Brown was relieved of his command early in October, by the arrival of his superior officer, General Izard. Izard saw at once that to gain any advantage he must attack Drummond's position, and he advanced to do so; but after a heavy skirmish he withdrew, finding Drummond too strongly intrenched. It was his final effort. Sir James Yeo, with another new ship added to his fleet, again had the supremacy on Lake Ontario, and was bringing up reinforcements. Izard, therefore, decided to abandon Fort Erie; and accordingly, on the fifth of November, his whole army having been withdrawn to their own side of the river, the fort was blown up and left in ruins.

And so the war on the Niagara frontier came to an end, leaving the British in possession of everything on the Canadian side of the river, and of Fort Niagara on the opposite side. To the invaders, the net results of their three campaigns for the conquest of Upper Canada were the possession of Amherstburg, which they had held since Procter's retreat, and the loss of their strongest fort.

The series of articles on the War of 1812 will be continued until it ends with the anniversary of the peace. These notes are not a history of the war. Deriving their chief interest from the dates of occurrence, the articles have necessarily been detached and disconnected. They have not pictured horrid war, nor glorious war, but the

stern facts of war; and their object has been that indicated by the heading — to take up in the order of their occurrence certain selected incidents, and thus to teach in a general way what the war meant to Canada. They had a deeper purpose, which may be admitted now, though it could not very well have been avowed at the beginning. By keeping before teachers and pupils the thought of war, they were to be a reminder that war is an ever present possibility for which we should be prepared. They were to counteract in some measure the false teaching that the way to avoid war is to be unready, and to teach instead that to be unready is to invite attack. This lesson has been more convincingly taught by the terrific war in which we are now involved. It will be many years before we can again be misled by the argument that because war is an evil it is wrong to make any preparation for it. As long as war is an evil which may or may not come upon us, so long will armament be an evil which we shall have to bear. We can only hope for a time in the far distant future when there will be an end of both.

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The following is the list of Scholarships awarded at the Summer School of Science in July, 1914.

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Lt. Governor Rogers.....	\$ 3.00	Emma A. Smith.
Lt. Governor Rogers.....	\$ 2.00	Agnes E. Hamilton.

HIGH SCHOOL LITERATURE

MISCELLANEOUS QUESTIONS ON THE LAY OF THE LAST MINSTREL.

1. What do we learn from the "Lay" of the manners and customs of the Border in the sixteenth century? Of the arms? Dress? Music? Feasts? Hours for meals? Food? Amusements? Learning? Religion? What virtues were honoured?

2. "They talked of feats of arms of old." Who did? Scott seems to lose no opportunity of referring to such feats. Collect instances.

3. Had the Minstrel ever seen a battle? A tournament? Canto V, 19. Compare the challenges in Shakspeare's Richard II, Act I, Sc. 3. Canto V, 22. Compare the tournament in "Ivanhoe," and Canto VI, 32, in "Marmion."

4. What is an ultimatum? By whom was one delivered in the "Lay." Give it, and the answer to it, in your own words.

5. How long a time does the story cover? Make a list of the events of each day.

6. Scott avoids monotony in three ways: 1. By variation of metre; 2. by varying the arrangement of rhymes; 3. by introducing songs. Illustrate this from the "Lay". Name any songs from his other long poems.

7. Collect all the references to Douglas. Is this the Douglas who appears in Marmion? Prove your answer.

8. Discuss: Did Scott prefer to write of love or of war?

9. How did the Buccleughs get their name? What was the Thirlestane motto? Lord Cranstoun's crest?

10. Make a list of the war cries quoted in the poem, and add any others that you have read of.

11. "All the pearls Queen Mary wears." What Queen Mary? Was she reigning at this time?

12. Scott is very fond of the adjective "fair." To what localities does he apply it? How does he use it as a noun? What do you gather from the poem as to the characteristics of Scottish rivers?

13. Did the Ladye accomplish anything by her magical powers? Why did the English accept her offer? Did she know why they did so? Did Margaret know that Cranstoun was going to fight in Deloraine's place?

14. What was "lost and won for a bonny white horse?" "would not yield to unchristened

hand?" "Dissolved the spell" laid by the dwarf?
"Waved in gales of Galilee?"

15. Who:—a. Was called "Belted Will?" b. "Was always for ill and never for good?" c. Had been outlawed five times? d. "Had fought in Spain and Italy?" e. Had five sons who were stately warriors? f. "Never twanged the yew in vain?" g. Knighted William of Deloraine, and where? h. "Whoever lost, were sure to win?" i. "Hated Henry's name as death?" What Henry? And why did they hate him?

16. "Last St. Barnabright," when was that? Collect other phrases fixing dates, or times of day. At what day and hour, and in what exact spot was the Wizard buried, and why?

17. "The lances waving in his train

Clothe the dun heath like autumn grain."
In what point is the likeness? Pick out three other similes or metaphors and show the point of comparison in each.

18. Give the context and explain:—a. The scrolls that teach thee to live and die. (cf. a line in Gray's *Elegy*.) b. Had gifted the shrine for their soul's repose. c. When the Red Cross spied he, the boy strove long and furiously. (What other red cross is mentioned in the poem? What does the "Red Cross" stand for today?) d. Fell by the side of great Dundee. e. "They were not armed like England's sons, But bore the levin-darting guns." f. "Acre's conquered wall." g. "Soon the *hated heath* was past." h. "They 'gan to reckon kin and rent." i. Lothian heard the Regent's order.

19. Where else in poetry are Yarrow stream and St. Mary's Lake mentioned?

20. Sketch the life of the old Minstrel. Write a character sketch of William of Deloraine; a description of Melrose Abbey by moonlight. Write in your own words the story that the Monk told to William of Deloraine; the conversation in Harold's song, verses 2-5. Compare the ballads sung by Harold and Albert Graeme, and note the different ways of telling a story.

Autumn day, fruitful day,
See what God hath given away:
Orchard trees with fruit are bending,
Harvest wains are homeward wending,
And the Lord o'er all the land
Opens wide His bounteous hand,
Children gathering fruits that fall
Think of God, who gives them all.

APPLE PICKING AND NATURE LESSONS.

L. A. DEWOLFE.

The only nature lessons that appeal to children are the informal ones suggested by something in their daily experience. The month of October is rich in such experiences. Every child is interested in the gathering of the crops, whether he helped grow them or not.

Shall we see if there are any nature lessons suggested by apple picking? How old are trees before they bear apples? How long will they continue bearing? Do the trees planted half a century ago bear the same kind of apples as those planted ten years ago? What are the names of some of the older variety of apples? What are some of the more modern ones? Where do new varieties come from? How are they perpetuated? Could we ordinary people originate a new variety of apple? How? If you wanted to start a new orchard, where would you get your trees? If you got them from a nursery, where did the nurseryman get them? If he grew them, how did he grow them?

But, some reader will prefer that I answer these questions before I ask others. Why not set your children at work looking for the answers? They can learn something from the intelligent men of the community — though part of the information they get in this way will be false. Would it not be interesting, however, in any section, to see how many views are held regarding some of the questions already asked?

You, as a teacher, would be wise to get your information from government bulletins or reliable books rather than from some local source. This, of course, applies only to cases where you can't make your own observations first hand.

It is interesting to note that new varieties of apples are appearing on the market. Only last week, I had the privilege of seeing the parent tree of a new variety recently named *Evangeline*. *Evangeline* apples are likely to be on the market ten years from now. Yet, at present, only one *Evangeline* apple tree exists. It is in an orchard owned by Mr. Hunt, South Williamston, Annapolis County. If you ask Mr. Hunt how the tree got there, he will tell you it is a seedling. Well, is that remarkable? Aren't the nurseryman's trees that you were going to buy seedlings? Perhaps not. If not, what are they?

Though it seems rather cruel of me to raise all these questions and then leave them unanswered, I am going to do so. If any one wishes a month later to know the answer, take the trouble to ask me and I'll tell you. In the meantime, make sure that your own conclusions are right. I shall venture only one statement. If there should ever be an orchard of Evangeline apples, it will *not* come from seeds taken from that Evangeline tree now growing in Annapolis County. Then, where will it come from?

Let us go back and pick another basket of apples! Where does the apple grow? Is it on the *end* of a twig or not? Did all twigs on the tree grow an equal amount last year? Notice that next apple. Is it on a twig that grew more or less than an inch last year. See, there's a twig that grew eight inches last year. How do I know? I know by looking at it. You look. Is it bearing any apples? No? Have none of the fast-growing twigs borne apples? That is interesting. Can we account for it?

The short, stout wrinkled twigs that bear apples are called "fruit spurs." I used to be told that for every spur I broke off when picking apples, there would be one apple less next year. Is that true? Look at next year's fruit buds. That will tell you. What? You don't know which are fruit buds? Then, the pleasure of finding out is still ahead of you.

Why are some of these apples more deeply colored than others on the same tree? Why are some larger than others? Did they all have an equal start in life? Cut open a large one and a small one. Are the seeds the same size in each? Might the size of the apple be influenced by the seed, or is the size of the seed influenced by the apple? Which is cause and which, effect?

It takes so much less time to ask questions than to answer them that I believe I'll ask some more. Even if you, teachers, don't know the answers yourselves, you should not refrain from asking your pupils. Search together for the answer. Let your pupils win occasionally in this game of "Hunt the answer."

Some of these apples are scabby. What is apple scab? How does it spread? How can it be controlled?

Perhaps we have picked enough apples for today. Let us sort them into No. 1, No. 2 and No. 3, according to law. Have you read the Act govern-

ing fruit marking? What shall we do with these wormy apples? What is that "worm" anyway? [Look up Codling Moth.]

Shall we pack in barrels or boxes? What is the legal size of each? Measure a barrel and find approximately its cubic contents. How much will a barrel of apples retail for at 30 cents a peck?

Of what kind of wood is an apple barrel made? What does a barrel cost? What kind of wood is used for hoops? What are pulp-heads? Find out all you can about these.

What other industries depend on the apple industry? Do you know about the manufacture of vinegar?

To what places are our apples shipped? Over what railways and steamship lines are they carried? What is the probable yearly revenue from our apples? How much do the transportation companies collect in freight on this one item? [I shall leave other questions for the teacher.]

Assign a few of these questions each week for the children to find out. If you yourself don't know where to find helpful literature, ask someone who does know. Above all things, use these everyday commonplace things to keep the children human and interested in human affairs.

ORAL DRILL IN PERCENTAGE.

1. What is 1% of:—a 100? b. 300? c. 150? d. 840? e. 780? f. 75? g. 80.50? h. 101.65? i. 1.63? j. .50?

2. What is 10% of:—a. \$40? b. \$200? c. \$150? d. \$360? e. \$19.35? f. \$13,046? g. \$8? h. \$76? i. \$150.50? j. .65?

3. What is 25% of:—a \$400? b. 160 days? c. 240 weeks? d. 56 bushels? e. 5.6 pounds? f. 14.4 T? g. .4A? h. .25 barrels? i. 1000 feet? j. \$1.25?

4. What is 75% of:—a. \$16? b. 72 sheep? c. 80? d. \$240.80? e. \$25? g. \$320? h. \$1½? i. \$8½? j. \$16¾?

5. What is 12½% of:—a. 24 quarts? b. \$500 c. \$0.72? d. \$7.60? e. \$140 miles? f. 600 rods? g. 320.08 A? h. 48½? i. 4 .86 yards?

6. Find 20% of each number given in Exercise 1.

7. Find 50% of each number given in Exercise 40.

8. Find 30% of each number given in Exercise 2.

For the REVIEW.]

FOR THE PRIMARY GRADES.

CORRELATION OF SUBJECTS.

The Correlation of Subjects—the title sounds imposing, but the idea in the mind of the writer is simply to show how one lesson in the day's work naturally links itself with another entirely different lesson, and not only opens up new ideas on that subject but strengthens and supplements the truths already taught.

Reading is a subject which must be taught in all grades, and as this paper has to do with the lower grades particularly, let us take some of the lessons contained in—say the First and Second Readers—and try to bring out the thought of correlation from these.

But here let me strike a note of warning:

The reading lesson should be a reading lesson, and the suggested lessons should not encroach on the reading period, but should have their own allotted time. I have seen a so-called reading lesson which was really a lesson in general information.

Vacation is over, and Grade III with crisp, new readers begin to read "About Mr. Crab." In the first sentence "queer things" are promised, and surely these queer things must be in the line of a nature lesson. I must confess that it took me some time to find those interesting things as narrated in the aforesaid book. But we made a determined attempt to look for them; we procured a real crab—a good drawing or picture is the next best thing—and these are some of the interesting things we found out:

Mr. Crab is a relative of the lobster (this had to be accepted without proof).

He has five pairs of legs—four pairs of walking legs and one pair of claws—(uses of claws pointed out). We noticed the feelers in front, and the position of the eyes and mouth. Attention was called to his armour or shell—dark green before boiling and red after. The fact that Mr. Crab outgrows his shell and that empty shells may often be picked up was discovered.

The peculiar manner of carrying the eggs until hatched was emphasized and some different kinds of crabs named. Children will find the story of the "Fiddler Crab" and how he gets his name most interesting, as also the "Spider Crab."

The story of the crabs found on the Island of Ceylon, which live in holes and, being good run-

ners, are in the habit of carrying off birds and rabbits and taking them into their holes, proved most interesting, so that when we finished our first story, we did really know a little "About Mr. Crab."

In the same Reader are stories about the cat, fly, lion, dog, pig, bee, donkey and cow, and these may all be treated in somewhat similar manner. What child is not interested in the cow and its peculiar process of digestion, and in the donkey as compared with the horse?

I will confess that the story of the "Bee Babies" I approached for many terms with exceeding dislike. There is something peculiarly unhappy in the composition of this story which makes it, in spite of its one-syllabled words, most difficult to read intelligently. But could anything be more interesting than the story of Bee life? That particular reading lesson may have failed to make the subject interesting; it remains, then, for the teacher to supplement from her own fund of information and bring to light some of the interesting things which are only hinted at in the text. Under this treatment, the dislike to the "Bee Babies" as a reading lesson will disappear.

"The Butterfly's Baby" is a lesson that almost any teacher will seize upon for a nature lesson or a talk upon the production of silk, satin, velvet, etc.

The Chickadee-dee and the parrot suggest a lesson on birds.

The "Story of a Snowflake" gives one the opportunity to talk about steam and the invention of the steam engine. When reading "The Hailstone's Story" the subjects of evaporation and condensation are naturally suggested.

The wise teacher will have discovered that the most effective method of impressing lessons on morals and manners is by stories and illustrations, and so will not fail to emphasize the thought of kindness to playmates in "Harry's Sled," courtesy to others in "Being Obliging," and the thought of manliness and honesty in the "The Broken Window." I have seen the lesson taught in that story bear fruit in a class of boys, when a window was broken under somewhat similar conditions.

But if there is one lesson more than another that I like to utilize in this way, it is "The Rainbow Fairies." I think it quite possible that many a class has read this story and never discovered

what a fascinating colour lesson it contains. Here are your original three fairies—the three Primary colors—three children with three bright sticks of chalk. Next comes the mixing and rubbing which produces the three new colors for the three dyed dresses—the Secondary colors. I remember well the boy who looked in the most puzzled manner at the brilliant green color that materialized, and assured me that “We didn’t have no green.”

Then comes the beautiful rainbow when the fairies join hands. Each of the six children puts in a color, noticing how the colors blend. I have yet to find the class who will not respond with the keenest interest to the “Rainbow Fairies” as a color lesson.

In the Grade IV Reader, we find such animals as the bee, squirrel, donkey, fox, cow, bear, elephant, lion, wolf and goat mentioned, and such birds as the crow, humming-bird, white-throated sparrow, etc. These all furnish subjects for most interesting talks.

We find a chance to discuss Longfellow and Tennyson when we read such lessons as “The Children’s Hour,” “The Arrow and the Song,” and the “Lullaby,” and one has only to work with children of the lower grades to find how thoroughly they appreciate the beautiful thoughts of the poets.

A lesson on direction is suggested by “The Winds.” “The Signs of the Seasons” will appeal to all children as an opportunity to tell you some of the outward changes which they have noticed as accompanying the changing seasons.

Two of England’s heroes—Nelson and Wellington—figure in “Lord Nelson’s Boyhood” and the “Courageous Boy,” and afford a splendid chance for a talk on national heroes and patriotism.

Respect for the aged is suggested by “Somebody’s Mother,” and people who have thought out inventions by “Rob and his Shadow.”

Great battles in Canadian History are suggested by “My Own Canadian Home” and “The Maple Leaf Forever.”

There is also a model letter in this book, and when reading this, we naturally think it a good time to test the proficiency of the class in the subject of letter writing; and so, in various ways this idea of correlation works itself out. If, at the beginning of the year, it were suggested to

the teacher that she should give lessons on all these subjects, it would seem almost like asking the impossible, but with the story for the day suggesting the lesson for the day, there is little difficulty in getting in short lessons on these and many other subjects.

It goes without saying that every lesson is a lesson in English, and can be utilized as such. Especially is this true of New Brunswick history as related to composition.

I have found it a good plan to tell the children a story from history and then let them reproduce it in their own words, with perhaps a catch-word here and there to help. These exercises are read and the mistakes marked, then they are rewritten. Again, they are read and marked and, being again rewritten, can be kept as permanent notes if the children so desire.

Some lessons can be illustrated, and used as drawing lessons. The required chapters in the Health Reader serve the purpose of supplementary reading—in fact there is no end to the ways in which the subjects in the course, even in the Primary grades, may, with a little ingenuity on the part of the teacher, be made to supplement and strengthen one another and give variety to the day’s work.

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INDIAN SUMMER.

Along the lines of smoky hills,
The crimson forest stands.
And all the day the blue-jay calls
Throughout the Autumn lands.

Now by the brook the maple leans
With all his glory spread,
And all the sumacs on the hills
Have turned their green to red.

Now by great marshes wrapped in mist
Or past some river's mouth,
Throughout the long, still Autumn day
Wild birds are flying south.

— W. Wilfred Campbell.

All good gifts around us
Are sent by Heaven above;
Then thank the Lord, oh thank the Lord,
For all His love.

A STORY OF SHEAVES.

The Bishop of London told a beautiful story in one of his mission sermons: "All the children were coming up with their sheaves to be let into the great harvest home. An angel was standing at the door and one of the children had no sheaves at all. The angel said no one could come without sheaves. Then the other children, one by one, began to plead for this child, "Let him in," said one; "do let him in, dear angel. He had several sheaves earlier in the day, but I was tired and he gave me one of his sheaves, one of these belongs to him." Another said; "Do let him in, dear angel. I was thirsty as I passed along and he went and filled me a cup of cold water to refresh me." One said this, and another said that. Finally the angel stretched his arm around the door and took out a bundle of sheaves. "There are his sheaves," he said. "Yes, I know all about it; he thought of others more than himself." And turning to the child, he said: "Lead the way in."
— *Evangelical Messenger*.

THE "PIGGIEST" PIG.

By C. P.

When the children went down to the farm there was nothing they liked better than to visit the pigs. There were many pigs of all sizes in different pens, and whether they rooted or slept, or stood with their snouts up over the edge of the pen, the children never tired of watching them.

The "piggie" pig of them all, as Tommy soon called him, was a big fellow in a pen by himself. He earned his name one day in a funny manner. Grandpa brought him a big pail of milk, which completely filled the wooden

trough in the pen, and yet after he had eaten every drop of it, he crawled into the trough, stretched out, and went to sleep.

Tommy puzzled hard, but could not understand it. It was not so much that the greedy pig had eaten a troughful of milk, and it was not surprising that the pig should sleep in the trough, but how could it be possible to get both pig and milk into a space which the milk alone had filled but a moment before? — *Youth's Companion*.

Then came the Autumn all in yellow clad,
As though he joyed in his plenteous store,
Laden with fruits that made him laugh, full glad
That he had banished hunger. . . .

Upon his head a wreath that was enrolled,
With ears of corn of every sort, he bore;
And in his hand a sickle he did hold
To reap the ripening fruits, the earth had yold.*

*Yold—Yielded.

— *Edmund Spenser*.

AUTUMN FIRES.

In the other gardens,
And all up the vale,
From the autumn bonfires
See the smoke trail!

Pleasant summer over
And all the summer flowers,
The red fire blazes,
The gray smoke towers.

Sing a song of seasons!
Something bright in all;
Flowers in the summer,
Fires in the fall!

— *R. L. Stevenson*.

THE SWALLOW.

Fly away, fly away, over the sea,
Sun-loving swallow, for summer is done,
Come again, come again, come back to me,
Bringing the summer and bringing the sun.

When you come hurrying o'er the sea,
Then we are certain that winter is past;
Cloudy and cold though your pathway may be,
Sunshine and summer will follow you fast.

— *Christina Rossetti*.

"O Trinity of Love and Power,
Our brothers shield in danger's hour;
From rock and tempest, fire and foe,
Protect them wheresoe'er they go,
And ever let there rise to thee
Glad hymns of praise from land and sea."

"O God of Love, O King of Peace,
Make wars throughout the world to cease;
The wrath of sinful man restrain,
Give peace, O God, give peace again."

SUGGESTIONS FOR ENGLISH COMPOSITION IN THE LOWER GRADES

1. Write a complete sentence in answer to each of these questions. Begin each sentence with a capital letter, and on a new line, and end it with a full stop.

What is your name?

What is your father's name?

What is the name of the boy or girl next you?

What is the King's name?

What is the Queen's name?

2. Write five sentences in which you use the names of persons whom you know.

3. Copy from the board the names of the days of the week. Notice that each begins with a capital. Write seven sentences, telling something that you do on each day, like this:—On Sunday I go to church. I go to school on Monday. Be sure to put the word "on" before the day of the week.

4. Write seven questions asking permission to do something on each day of the week, like this:—May I wear my new hat on Sunday? May I go to the picnic on Saturday?

5. Copy the names of the months. Write twelve sentences, telling about something that we cannot do in each month of the year, like this:—We cannot mow the grass in January. We cannot make snowballs in July.

6. Copy the short way of writing the names of some of the months:—Jan.=January, Feb.=February, Mar.=March, Apr.=April, Aug.=August, Sept.=September, Oct.=October, Nov.=November, Dec.=December. May, June and July are always written in full. Write in sentences, answers to these questions:—Punctuate carefully, and put "on" before each date.

When were you born? (I was born on May 28, 1904.) On what date does Christmas Day come? On what date did school begin? When do we celebrate Victoria Day? When do we keep Thanksgiving Day?

7. (The teacher puts the abbreviations "a.m." and "p.m." on the board, and explains them.) Write in sentences answers to the questions:

What does a.m. mean? What does p.m. mean? At what time does morning school begin? At what time does afternoon school begin? When did you get up this morning? When do you go to bed? At what time does school close?

8. Write down in figures and letters — A quarter past nine in the morning; and at night; half-past ten at night; and in the morning? A quarter before eight in the morning; and in the evening.

9. Write five sentences about what you can see from your bedroom window?

10. Tell in ten short sentences what the following things are used for: ink, flour, button, axe, string, ball, fork, water, glass, purse.

11. Copy and learn by heart:

The child that is born on the Sabbath day
Is blithe and bonny, and good and gay,
Monday's child is fair of face,
Tuesday's child is full of grace;
Wednesday's child is loving and giving
Thursday's child works hard for his living,
Friday's child is full of woe;
Saturday's child has far to go.

12. Write sentences telling what you like best to do: 1. At recess; 2. After school; 3. After supper; 4. On Saturday morning; 5. On Sunday evening.

THANKSGIVING.

Canada's first annual Thanksgiving was that proclaimed by the people of Halifax in 1763 for the conclusion of the peace that gave Canada to Great Britain. Throughout the colonies of British North America days of Thanksgiving were frequently proclaimed, but these were on special occasions and not as an annual observance. The first Thanksgiving Day in Lower Canada was proclaimed on the 22nd of December, 1798, and observed on the 10th of January, 1799, "In signal victory over our enemy and for the manifold and inestimable blessings which our Kingdoms and Provinces have received and daily continue to receive." The first proclamation of a day of Thanksgiving in Upper Canada appears to be dated the 17th of May, 1816, and was observed on the 18th of June, 1816, for the end of the war between Great Britain and France. After Confederation the first proclamation was issued on the 1st of March, 1872, for the restoration of the health of the Prince of Wales. The first of the annual Thanksgiving Days, which are now observed, was proclaimed on the 9th of October, 1879, and observed on the 6th of November, 1879. Since that time proclamations have been issued every year.—*Exchange*.

WHO, WHAT AND WHERE?

SEARCH QUESTIONS FOR COMPETITION.

[Questions on various subjects will appear in each issue from October to March. Marks will be given for correct answers, and in April a small prize will be awarded for the highest marks. Answers to each month's questions will be given in the following issue.]

The competition is open to all readers of the REVIEW. All answers must reach REVIEW office before the first of the month. Write on only one side of your paper. Number your answers. Sign with a pseudonym or initials

WARS AND HEROES.

1. What is the last battle in which an English king fought in person?
2. What king was killed in a battle to which he went in disguise?
3. What great general of ancient times wished that his foes might fight in the air?
4. What is a Pyrrhic victory?
5. What famous university was founded as a reward for a city's brave resistance to a siege?
6. What poem represents the German fleet surrendering to the English for a ridiculous reason?
7. What line in the conclusion to Tennyson's "Princess" is peculiarly applicable to the present crisis?
8. By whom and of whom were the following words said:—
 - (a) One that sought but duty's iron crown.
 - (b) To him, as to the burning levin
Short, bright resistless course was given.
 - (c) How fit he is to sway
That can so well obey.
 - (d) He does not advertise.
 - (e) Joint heirs with Christ because they bled
to save
His weak ones, not in vain.
 - (f) Again their ravening eagle rose in anger,
wheeled on Europe-shadowing wings.
 - (g) For ——— never comes but to conquer or
to fall.
 - (h) The Prince of all the land led them on.

A COMMON DIFFICULTY.

Rachel was greatly distressed because her teacher had been saying to her, "Cigarette." She puzzled and puzzled her little brain over it—what could she mean? Finally, one night she said to her mamma, "I do not know what Miss G. means. She tells me to 'Cigarette' every day."

The next day Rachel's mamma was a visitor at the school to see if she could unravel the mystery. She had not been in the room long before the teacher began a writing lesson. She said to the children in a rapid voice, "Sit erect." Rachel gave one glance at her mamma. The mystery was solved.

That evening when Rachel came home her mamma explained what Miss G. had been saying to her, and what it meant. After that Rachel was considered a more obedient child.

How many little folks like Rachel wonder and wonder what we mean, and how many teachers mistake misunderstanding for disobedience, no one knows. We often speak so rapidly, forgetting that the little untrained ears fail to grasp the meaning. Then we think our children disobedient.

Years ago a visitor came to a Nova Scotia school to introduce the tonic Sol Fa system. After a brisk and all too one-sided explanation, he called upon the children to sing the notes after him, pointing at different pupils in turn. One little girl sat gazing at him fascinated, but utterly mystified. "Sol-Sol-Sol," sang the teacher, and suddenly his finger darted straight at her with an explosive "You." With eyes growing rounder, and rounder, the frightened child rose and pointing her small finger at her instructor, obediently quavered out "Salt—salt—salt you."—*Exchange*.

CHARADE.

'T was not on Alpine ice or snow,
But purely British ground,
"Excelsior" was their device,
But sad the fate they found.

They clamped, not for love of fame,
But followed duty's call;
United were they in their aim,
Divided in their fall.

Two child characters, very famous in poetical history,
Who can they be?

"TRUE EMPIRE LIES IN THIS."

When the British Lion strikes
In a righteous cause and just,
Count on the Lion's brood
Reckon with them you must!

Count on the loyal sons,
True sons of the Motherland —
Who though the seas divide
Are with her, heart and hand!

Count on such times as these
To bury petty strife;
Count that we stand or fall
One with the Empire's life!

Striking a blow for Right;
Helping a brother's need;
These are the things that count
In a true Briton's creed.

So shall we fight this fight;
So shall we fight this wrong;
Judge thou, oh Lord of Hosts,
Make thou Thy people strong!

—Emma Veazey.

[The following poem appeared in The "Times" of August 24.]

THE KING'S HIGHWAY.

When moonlight flecks the cruiser's decks
And engines rumble slow,
When Drake's own star is bright above
And Time has gone below,
They may hear who list the far-off sound
Of a long-dead, never-dead mirth,
In the mid watch still they may hear who will
The song of the Larboard Berth.

*In a dandy frigate or a well-found brig,
In a sloop or a seventy-four,
In a great First-rate with an Admiral's flag,
And a hundred guns or more,
In a fair light air, in a dead foul wind,
At midnight or midday,
Till the good ship sink her mids shall drink
To the King and the King's Highway!*

The mids they hear — no fear, no fear!
They know their own ship's ghost:
Their young blood beats to the same old song
And roars to the same old toast.
So long as the sea-wind blows unbound
And the sea-wave breaks in spray,
For the Island's sons the word still runs
"The King, and the King's Highway!"

In this dire calamity which has befallen our Empire, it is well to recognize the true source of our inspiration comfort and strength. Pierre Bernard has written few things more beautiful than the following:—

Our Father —

By right of creation,
By bountiful provision,
By gracious adoption;

Who art in Heaven —

The throne of thy glory,
The portion of thy children,
The temple of thy angels;

Hallowed be thy name —

By the thoughts of our hearts,
By the words of our lips,
By the works of our hands;

Thy kingdom come —

Of Providence to defend us,
Of grace to refine us,
Of glory to crown us;

Thy will be done on earth as it is in Heaven —

Toward us without resistance,
By us without compulsion,
Eternally without declension;

Give us this day our daily bread —

Of necessities for our bodies,
Of eternal life for our souls;

And forgive us our trespasses —

Against the commands of thy law,
Against the grace of thy gospel;

As we forgive them that trespass against us —

By defaming our characters,
By embezzling our property,
By abusing our persons;

And lead us not into temptation, but deliver us from evil —

Of overwhelming afflictions,
Of worldly enticements,
Of Satan's devices,
Of error's seductions,
Of sinful affections;

For thine is the kingdom, the power, and the glory,
forever —

Thy kingdom governs all,
Thy power subdues all,
Thy glory is above all;

Amen. —

As it is in thy purposes,
So it is in thy promises,
So be it in our prayers,
So it shall be to thy praise.

—Toronto Mail and Empire.

If teachers fail, whether in quantity or in quality, or in both, it will not be *wholly* because of poor salaries or hard conditions — men and women have thriven on both before now — but for want of vision, want of faith, and want of hope. — *Selected.*

TEACHERS' INSTITUTE.

Northumberland County sent 110 teachers, a record number, to attend the Institute in Chatham, September 24th to 25th. The meeting was opened by addresses from the Chief Superintendent of Education, Dr. W. S. Carter, and Inspector G. W. Mersereau; the President, Mr. L. R. Hetherington in the chair. Lessons were then given in the different grades of the Central School, by the respective teachers, and these, as well as the demonstration lessons in manual training and domestic science given in the afternoon, were of much interest to the visiting teachers. Mr. H. H. Stuart, secretary of the Institute, read a paper on The Teaching of Canadian Civics, and the discussion that followed was taken part in by Dr. Carter, Director Steeves, Inspector Mersereau and Miss Eleanor Robinson, Editor of the REVIEW. At the public meeting on Thursday evening, Inspector Mersereau presided, and addresses were given by Mayor Tweedie, Mr. W. B. Snowball, Chairman of the School Board, Dr. Carter, and Mr. R. P. Steeves, Director of Elementary Agricultural Education. A chorus was sung by the pupils of the school, and piano selections given by the Misses Babineau.

On Friday morning, Dr. Melvin of St. John read an excellent paper on Medical Inspection of schools, and was followed by Dr. Marven of Chatham and Mr. H. H. Stuart of Douglastown. It was agreed that the backwardness of New Brunswick in introducing Medical Inspection is due to the fact that the matter is left to local option, and the following resolution, moved by Mr. H. H. Stuart, and seconded by Inspector Mersereau was unanimously carried:—Resolved, that in the opinion of this Institute it is desirable that the Board of Education enact a regulation making compulsory the medical inspection of all school buildings and pupils. Miss Robinson, editor of the REVIEW, gave an address on the use of books, and the teaching of literature in the lower grades. Director Steeves spoke on the importance of school gardening, and gave some valuable directions as to the use of the Nature Study Manual. At the final session, everyone enjoyed the clear and instructive lesson on, How to teach Elementary Astronomy, by Mr. F. A. Good, of the Provincial Normal School.

The officers elected were: President, G. H. Harrison, Chatham, vice-president, Miss Jennie

Gremly, Newcastle; secretary-treasurer, H. H. Stuart, Newcastle; additional members of executive, W. C. Haines, Loggieville; G. A. Walhen, Doaktown; L. R. Hetherington, Newcastle.

STORIES FOR REPRODUCTION.

This is a story that I read in a newspaper about a brave and merciful man. He is the Mayor of a little French town near the German border. Soon after the war began, the German soldiers came to this town, and it could not be defended against them, for all the strong young men had gone to the war. The people ran and hid in their cellars, but the Germans broke down and burned the houses and killed many people, even women and little children. One of the women who was killed was the wife of the Mayor; her husband could not save her. When the Germans had taken all the money and food that they could find they marched on, leaving the little town in ruins. The Mayor worked hard to comfort and encourage his poor people to help them repair the houses and make the town fit to live in. While they were doing this, a band of French soldiers came, bringing some German prisoners. The people wanted to kill the prisoners, but the Mayor forbade them, and after a great deal of trouble, succeeded in saving the lives of his enemies. When the authorities in Paris heard of it, they sent him the Cross of the Legion of Honor, for being faithful to his duty when he was in great trouble, and for showing mercy to those who had injured him.

SAVING THE FLAG.

The white ensign is the flag of the Royal Navy. A newspaper correspondent, writing about the men who had been rescued from the British cruisers that were blown up by a German submarine, says: "I saw one bluejacket asleep covered with a white ensign. He snatched it up before diving overboard. He held it in his teeth while in the water and refused to part with it when rescued. He is now prepared to fight anyone who may attempt to steal this last relic of his ship."

DOGS OF WAR.

In some countries dogs are trained to work with Red Cross and Ambulance Societies. After a battle, the dogs are sent over the field to find the wounded. Each dog wears a white blanket

with a red cross upon it, so when a poor wounded soldier feels a dog licking his face, if he can open his eyes and see the Red Cross, he knows that help has come. Sometimes a dog wears a bell that rings as he runs about in his search. When the bell stops ringing, his master follows its last direction and comes upon the dog waiting beside the wounded man. Other dogs have been trained to bark as soon as they find a man who needs help. Others are taught to take a man's cap, or something from his pocket, and take it to their masters.

The Belgians have a club of Ambulance dogs, and they have contests where prizes are given to the best trained dogs. This year there was to have been a contest of this kind in Holland, but now the clever creatures, instead of winning honors in shows, are hard at work upon the battlefields, helping to rescue the wounded.—*Adapted from Our Dumb Animals.*

CLEVER CROWS.

In Ceylon, crows are everywhere to be seen. They meet you at the wharf, skip in front of you up the street, hop on the veranda, and swing from the cocoanut palm trees. They will steal spoons, and even cups, from the tea-table, carrying them off in their strong beaks. They know when lunch time comes at school, and will sit in a row waiting for the children to open their baskets. Then every cake and banana has to be held tight, or Mr. Crow will snatch it.

Once there was a small white woolly puppy. His dinner was put in a saucer, and set down for him on the garden path. How hungry the puppy was, and how good the dinner tasted! But he had hardly begun when two crows appeared. They looked at the white puppy for a minute, and seemed to be thinking. Then one crow hopped behind him and pulled his tail, hard. Puppy howled, and turned, and twisted, and struggled, and crow No. 2. ate the dinner.

THE WEATHER.

If the evening's red and the morning's gray,
It is the sign of a bonnie day;
If the evening's gray and the morning's red,
The lamb and the ewe will go wet to bed.

The South wind brings wet weather,
The North wind wet and cold together;
The East wind always brings us rain,
The West wind blows it back again.

THE COMIC SUPPLEMENT.

There are a number of influences operating against what is best in the work of our schools. Some of these, such as the street, the saloon, and the pool-room, are recognized by everybody; but we refer now to others, less noticeable but scarcely less pernicious, which take form in the low moving-picture exhibition, the coarse entertainment at cheap theatres, the vulgar song, the sensational newspaper, and the so-called comic supplement. Perhaps that hideous thing, the comic supplement, is the most insidious and the most pernicious. Cheap theatres and moving pictures are confined to cities and small towns; but the colored supplement goes everywhere.

Our teachers spend time and energy in the schools to give their pupils some appreciation of the beauty which lies in artistic forms and harmonious colors; and the pupils go home to gloat over the horrible caricatures and execrable coloring of the pictures in the illustrated supplement of the newspaper. In school, teachers try to foster children's taste for good literature through the media of the best selections from poetry and prose; but at home the children are allowed to pore over the coarse stories and crude humor of the illustrated supplement. The saving power of humor is something to be judiciously cultivated by teachers and pupils, but not that travesty of humor which finds expression in the comic supplement. Our schools stand for refinement of thought and speech, for politeness, kindness, fair play, and obedience to lawful authority. The illustrated supplement stands for coarse tastes, rude manners, and slang; it impairs the fine sense of fair play; and it encourages lawlessness. The whole tendency of the illustrated supplement is toward hooliganism.—*Western School Journal, Winnipeg.*

With the word temptation link three other words beginning with t. For every temptation can be so endured as to transform it into a *test*, *i. e.* a proof of what you have done in the past; into a *trial*, *i. e.* a proof of what you are in the present; and into a *training* for the future. Temptation—it is a hard word; who can bear it? But we can rejoice over a test of our past, we can exult in a trial of what we are, and can eagerly accept our training for a future which we are determined to have better than the times that are gone.—*Selected.*

BIBLE READINGS.

1. I Kings viii, 54-62.
2. Psalm xx.
3. Luke xi, 5-13.
4. Isaiah lxiii, 7-16.
5. Matthew viii, 23-27.
6. Psalm xxvii, 1-7.
7. II Kings vi, 1-23.
8. I Timothy ii, 1-8.
9. Matthew ix, 33-38.
10. Psalm lxxii.
11. Isaiah xliii, 1-7.
12. Ruth IIii, 1-12.
13. Ruth ii, 15-20
14. Genesis ix, 8-17; x, 22.
15. Phil. iv, 4-9.
16. Deut. xxiv, 19-22.
17. Psalm civ, 1-14.
18. Matthew xii, 46-50.
19. I Peter v, 5-11.
20. I Chronicles xi, 15-19.
21. I Chronicles xvi, 23-36.
22. II Chronicles xx, 20-24, 26-30.

ERRORS IN PRONUNCIATION.

A class of fifty pupils, having had their attention called to frequent errors in pronunciation, decided to keep a careful record for one week of words mispronounced by themselves and their teacher. The result was that five hundred words were listed before the end of the week.

What would be the result of such an effort in your class? Try it.

The following words appeared in the list of five hundred: picture, asphalt, geometry, usually, deaf, engine, been, surprised, easily, difference, separate, ruse, elastic, listening, length, drowned, library, peculiarity, address, suite, were, barrel, illustrate, blouse, encore, accurate, dew, perspire, kettle, pudding, aunt, clerk, calm, towards, perfume, progress, tremendous, ask, mischievous, arctic, resin, duke, government, education, chimney, poem, business, pulpit, suggest, popular, recipe, tomato, says, recognize, hospital, primary, service, peerless, evil, catch, notice, electric, problem, assume, history, Canadian, clothes, collegiate, children, February, often, geography, interest, pupil, literature, elementary, figure, advertisement, eleven, piano, probably, violin, slough, counterfeit.

DIPPING THE FLAG.**ONE OF THE OLDEST OF ALL METHODS OF MARINE GREETING.**

The salutation given when a vessel lowers or "dips" its flag is one of the oldest and most honorable of all forms of marine greeting.

This form of salute has always been demanded by English speaking seamen, and its exaction has burned the hearts and the powder of generations of naval commanders.

In the old days, for a foreign ship, whether merchant or naval, to enter an English port without veiling top-sails or dipping its national flag was to run the risk of war, although the profoundest peace existed.

Without warning or argument the shore defenses or a man of war would send a round shot across the bows or between the masts of the foreigner, and if the offending flag did not instantly come down the insolent intruder was brought to her senses by being raked through and through.

Such was the reception accorded by Sir John Hawkins in the sixteenth century to the Spanish admiral who, in time of peace, sailed into Portsmouth Sound without veiling his topsails or lowering his flag.

Salutes are essential matters of naval etiquette and are exchanged on an elaborate code fixed by the maritime powers. The number of guns to be fired under all circumstances is minutely stipulated.—*Harper's Weekly*.

WORK MEANS EFFORT.

The likings of children are many; their duty is, after all, only one. It is not the task of the school to entertain the children; the true task of the school is to teach them to do their best. Thousandfold is the material which different men have to master if they are to fulfil their life tasks and yet all this will be learned swiftly and gladly as soon as school has taught them the one great common lesson, that the best of life is work, and that work means effort. Nowadays too many leave the school with a smattering of rainbow-colored information; and yet they have not learned what they most need for their true life.

CURRENT EVENTS.

The strict censorship makes it difficult to follow the course of the war from day to day; but there is not much uncertainty about the general results up to the present time. All Belgium except Antwerp and a narrow strip along the coast remains in the hands of the German invaders. In France, after getting within a few miles of Paris, the invaders have been driven half-way back to the Belgian frontier. In East Prussia, the Russians have been driven back beyond the boundary line, and the Germans have followed them into Russian territory; but the Russians are again advancing and recovering the lost territory. Nearly all the Austrian territory north of the Carpathians is occupied by the Russians, who are still advancing towards Cracow. The Servians and Montenegrins have invaded Bosnia and are approaching the capital. The British have seized all the German islands of the Ladrões; the French have taken the German colony of Kamerun, on the Gulf of Guinea; and, following the example of New Zealand in sending its expedition to Samoa, the Australians captured the German possessions in the Caroline Islands, the Solomon Islands, the Bismarck Archipelago, formerly New Britain, and the German part of New Guinea. Kaio-chau, the Chinese territory leased by Germany, is being attacked by the Japanese and British; German East Africa is invaded on the north and on the south from the adjacent British colonies; and the British have taken possession of German South-west Africa. Thus the few German cruisers that were threatening British commerce are shut out from their home ports by the British fleet in the North Sea, and have no colonial ports of refuge.

But while British ships are comparatively safe at sea, and German commerce is stopped, at least for the present, there has been no decisive action on land, even though fiercer battles have raged, and are raging, than the world has ever seen before. The great battle of the Marne, which checked the German advance upon Paris, was followed immediately by the still greater battle of the Aisne (ayn), which has now lasted for more than three weeks and is still undecided. The fall of Antwerp, which is now feared, would complete the German conquest of Belgium, and enable the Germans to threaten the coast of England; but it is not expected that they can recover their lost ground in France, and at the same time check the Russian advance on their eastern frontiers.

Thirty thousand Canadian troops have crossed the ocean, and are now probably in England. Seventy thousand troops from India have landed in France, and for the first time our Indian fellow subjects are fighting the battles of the Empire in Europe. More will come from India if needed, more will go from Canada; more will come from other British colonies, and from the French colonies in Africa which have already sent men to the front. A regiment composed exclusively of French Canadians is to be raised in the Province of Quebec.

On the twenty-second of September, three British cruisers on patrol duty in the North Sea were sunk by a German submarine. The loss was not very serious in itself; but the event was of great importance in naval warfare, as it shows the vulnerability of great battleships with no protection under water, and the possibility of successful submarine attack.

The Germans have bombarded and partly demolished the famous cathedral at Rheims. One of the excuses given is

that its high towers were used as places of observation, to direct the fire of French guns, or that they might be so used if they were not destroyed.

General Botha, Premier of the Union of South Africa, and a former leader of the Boers, has taken command of the British operations against German Southwest Africa.

Home Rule for Ireland has at last become the law of the land, but it is not to come into effect for a year.

Eleven survivors of the Stefansson Canadian exploring party have been rescued from Wrangell Island, where they reached land in March last, after the wreck of the *Karluk*. Twelve of the original party are dead or missing. Besides these, Stefansson himself, who was not on the ship when she was crushed in the ice, started on an expedition to Banks Land five months ago, and has not been heard of since.

There is another insurrection in Mexico, Villa having declared war upon Carranza. There seems to be some force at work to keep up the disturbance until the United States shall be obliged to intervene, or until Mexico is divided, and the northern states, which are now said to favour Villa, become a separate republic.

The disturbance of trade caused by the war in Europe has compelled the United States to impose special taxes to make up for the loss of customs revenue.

By request of President Wilson, Sunday, the fourth of October, was observed in the United States as a day of intercession for peace.

An oil well in Mexico, said to be the largest in the world, is burning, and the money loss is estimated at seventy-five thousand dollars a day. All efforts to put out the fire have failed, and there is nothing to do but to let it burn. It is near the place where another oil well caught fire, some years ago, and continued to burn for three months.

A plea for the press of the world to work for the removal of misunderstandings and suspicions between the nations was recently made by the premier of Japan in addressing a gathering of journalists.

Because of the clear atmospheric conditions which prevail on Vancouver Island, the great seventy-two inch telescope purchased by the Dominion Government is to be erected at the summit of Little Cannich Mountain, seven miles from Victoria, B C.

By means of long and short puffs of smoke, which remain visible in the air for a long time, French military aeronauts can write Morse dots and dashes in the air. These signals may be read with a field glass several miles away.

Marconi predicts that wireless telephone service between England and France will be established within a year. He has now an apparatus with which he can telephone a hundred miles without wires. It has been adopted by the Italian navy. As is true of the wireless telegraph, it works better at night than in the day time.

The proposed exploration of New Guinea by airship has been abandoned for the present, partly for lack of funds, and partly because the frequency of thunder storms in New Guinea would make such an expedition extremely hazardous.

SCHOOL AND COLLEGE.

At a meeting of the Halifax Teachers' Union on September 11th, Dr. Howard Brunt, who has lately spent some time in Germany, gave a very interesting address on some phases of the war, dealing especially with the attitude of educated Germans in regard to it.

On Friday, September 25, the annual presentation of prizes to students of the Lunenburg County Academy took place in the Opera House, Lunenburg, with Mayor Hall, chairman of the School Board, in the chair. Principal McKittrick gave a very satisfactory report of the year's work. Fifty-five students received high school certificates.

Colchester Academy has an attendance of very nearly 300. The "A" class numbers forty-one. Of the teachers, who resigned from the staff in June, Mr. England, former vice-principal, is now superior of Dufferin Street School, Montreal; Mr. Lockhart is an assistant master in the same school; Mr. Caldwell will take the Arts Course at Acadia College, and Miss Lawrence will teach in Baltimore.

The new school building in Willow Street, Truro, is to be begun shortly.

Rev. W. Judd, curate of Christ Church Cathedral, Hamilton, Ont., has been appointed headmaster of the Collegiate School, Windsor, N. S., as successor to Mr. Handsombody, who has resigned after seventeen years of service as headmaster.

Mr. L. C. Harlow, of the N. S. Normal College has been transferred to the staff of the College of Agriculture. He is succeeded in the department of nature study, chemistry and mineralogy by Mr. J. M. Scott, M. Sc. (McGill), who has held posts on the staff of the Central Experimental Farm, Ottawa and at MacDonald College.

Miss Elizabeth Ellis, of Truro has succeeded Miss Florence Walker, as head of the Domestic Science Department in Windsor.

The new dean of the Law School, Dalhousie College, succeeding Dr. Weldon, is Dr. Donald A. MacRae, of Prince Edward Island. Dr. MacRae graduated from Dalhousie with honours in classics in 1898. He is a Ph. D. of Cornell University, where he was for a time an instructor. He has been assistant professor in Greek at Princeton University, and is a member of the Bar of Ontario.

The September number of the "Canadian Municipal Journal" contains a strong plea for the "Teachings of Civics in the Public Schools." By Principal Sexton of the Technical College, Halifax.

Twenty-five schools in Nova Scotia will have local school fairs this Autumn. Over 800 school children have home gardens, from which products will be exhibited. Most successful exhibitions have been held in Truro and New Glasgow.

The staff of the Amherst schools had a picnic at the Nappan Experimental Farm on Thursday, August 24th.

Mr. B. J. Lawson, School Commissioner, Amherst, and formerly chairman of the Amherst School Board, read a very interesting paper before the Municipalities Convention on August 31. The subject was the use of the public school buildings as centres for educational uses, recreation, social gatherings, and meetings for civic and municipal improvement. Mr. Lawson dealt with his subject under these four heads, and gave a brief report of

what different school sections are doing, showing that Amherst is leading in the work. He urged the advantage to the community of fuller use of the school plant and that the matter should receive the attention of the Union of Municipalities of Nova Scotia.

St. Francis Xavier University, Antigonish, has received a donation of ten thousand dollars from Captain P. Mockler of Colchester County. Three new professors have joined the staff of this Institution.

Miss Georgia Lent, of Freeport, N. S., is principal of the schools at Port Greville.

The University of New Brunswick has re-opened with twenty-nine new students. The Chancellor expects the total number attending this year to be about 150. There are no changes in the faculty.

A very interesting department at the St. John Exhibition was that devoted to child welfare. There were exhibits of work from the kindergartens and from the supervised playgrounds, and at certain hours each day the children might be seen at this work, or giving folk dances, learned in the playgrounds. There were also on exhibition a set of Montessori materials, loaned by Mrs. F. A. Foster, of Rothesay. In the Health Department, an exhibit from Montreal was shown and nurses from the Anti-Tuberculosis Society and the Victorian Order were present for an hour every afternoon to give advice and explain precautions for children's health.

Miss Ruby Bishop, who taught last year in Dorchester, N. B., is now teaching in the King George School in Calgary, Alberta. Miss Bishop writes in high praise of the Calgary schools. "People here seem to put education above everything else".

"Several changes have been made in the staff of the Sackville schools. E. D. MacPhee has been appointed principal, to succeed A. D. Jonah, who has accepted a similar position at Florenceville, N. B. Miss Florence Morton has been appointed vice-principal and teacher of Grade VIII. Miss Hattie Milner succeeds Miss Knapp, as teacher in Grades V-VI. Mr. Roy Crossman of Dorchester succeeds Mr. Roy Stephens, in the Advanced Department of the Upper Main St. School.

Two of the town schools are being rebuilt — the Salem St. and Upper Main St. schools. The new buildings, which are not yet quite ready for occupation will be provided with modern equipments.

The teaching of music has been introduced into the town schools. The work is being done by the staff teachers. Encouraging results are expected."

Mr. H. Irving, of Moncton, Rhodes Scholar from Mount Allison, was entertained at a farewell banquet by the Canadian Club of Moncton, before he left for Oxford.

Miss Edna Giberson, of Bath, who has been teaching in British Columbia, has taken charge of the Grammar School at St. Andrews.

The many friends of two successful teachers, Mr. Allan Cole, late principal of Kensington High School, and Miss Nellie Green, who taught in Spring Valley for three years will be glad to know that each has secured a good school in Saskatchewan. Mr. Cole is teaching in Greenside and Miss Green at Brisaylor, near Battleford. — *Charlottetown Guardian*.

The death of Dr. William Saunders, formerly Chief of Staff of the great experimental farm maintained by the Dominion Government near Ottawa, will cause deep regret throughout a wide circle of personal and scientific friends. For more than a quarter of a century until he was invalided two years ago, he was the controlling mind of an establishment which he did his best to develop as a great humanitarian institution. — *Halifax Chronicle*.

At the suggestion of Mr. T. B. Kidner, the school children of the Calgary public schools will knit, in their regular hours for needlework, caps and socks for our soldiers at the front.

The Annual Convention of the teachers of P. E. I., opened in Charlottetown on September 23, with an unusually large attendance.

OCTOBER MAGAZINES.

Since the war began, the selections in "World Wide" have been chosen with more than ordinary judgment. The issue of September 26 has extracts from articles in the London "Spectator," "Westminster Gazette," "Nation," and "Daily Telegraph," from the Manchester "Guardian," and from the New York "Times" and "Outlook." Most of these relate to the war more or less directly. Colonel Roosevelt's warning to the United States, called "Lessons of the War," and the report of Lord Rosebery's speech at Broxburn are of special interest. Canadians who have not access to many magazines and papers of the highest class will find the cream of them in "World Wide," and we are glad to draw the attention of our readers to the special offer of the publishers given in another column.

The fact that Canada is actually in a state of war is vividly impressed by Newton MacTavish in an article entitled "War Time in Canada," which appears in the October issue of *The Canadian Magazine*. Mr. MacTavish reviews what has taken place in Canada as a result of the war, bringing together into compact, comprehensible form all the various activities of the Government; in brief, he visualizes the operation of the Canadian governmental machinery which the war has set in motion. From the time of the summoning of the Governor-General and the Prime Minister to Ottawa to the call for further volunteers to go to the front a vast amount of preparation and precaution is here outlined.

Major John Gigelow contributes to the October *Century* a clear and timely analysis of "The Call to Arms in Europe" and Olive Schreiner furnishes several pages on "War." These head the list for timeliness and general interest.

Other articles include an intimate and delightful one by John D. Williams on that elusive quality of charm that makes the character of the great novelist and playwright, James Matthew Barrie; the second of Hilaire Belloc's illuminating studies of the French Revolution, "The Flight to Varennes;" Arnold Bennett's continued "From the Log of the Velsa," now speaking of French and Flemish waters.

Short stories are contributed by Mary Heaton Vorse,

Lawrence Perry, George Bronson-Howard, L. Frank Tooker, William Holloway and Dana Gatlin. Arthur Christopher Benson, the famous essayist, furnishes an essay on "Charm," and Arthur Rackman has painted the beautiful frontispiece.

We have just received a copy of the valuable little pamphlet "Why Britain is at War," in which the causes and the issues of the great war are set out in brief form and simple language from the diplomatic correspondence and speeches of His Majesty's Ministers. The Victoria League prepared this pamphlet for circulation in the United Kingdom and in the Dominion, as part of their campaign for distributing information about the war. It is now offered for sale to the general public and should be widely distributed. [The Macmillan Company of Canada, 70 Bond Street, Toronto. Post paid 10 cents.]

The September number of "The Round Table" is a special war number, reviewing the origins of the war and the great issues raised by it. The causes assigned are two, Austro-Hungarian politics and the aims of modern Germany. A good map shows the distribution of races in central and eastern Europe. It indicates in a general way the fact that Austria and Hungary are more divided by race differences than any other country; and one is not surprised to learn that it is no simple matter to keep peace between these races. In Austria, the Germans, who comprise about one-third of the inhabitants, and in Hungary, the Magyars, who are about half the population, have the political ascendancy over the other races; and especially in Hungary this power is used to tyrannize over the subject peoples. The first article in the magazine deals with the struggles of the last twenty years against the predominance of the German and Magyar races, and the plans for a new constitution for the Empire, in which all races should be represented. This plan of reconciliation, it appears, was favored by the Archduke Francis Ferdinand, whose murder was the immediate cause of the present war. But the rise of Serbia to a leading position as a result of the late Balkan wars had led the Serbs, who with the addition of their kindred the Croats are twice as numerous in Austria-Hungary as they are in independent Serbia, to look for political union and a revival of the ancient glories of their race; which would mean a breaking up of the dual monarchy. The Austrian rulers, therefore, as a matter of self preservation, felt it necessary to seize the first opportunity of crushing Serbia. As to the second cause, the aims of Germany, the writer argues convincingly that modern Germany has inherited from Prussia a belief that her way in the world is to be won by the sword. Hence he suggests that the real issue which is being determined in this war is whether the ideas of Britain or the ideas of Prussia are to extend their dominion over the world. The aim of modern Germany is shown to consist in dominion over everything and everybody not German. The aim of the British Empire is shown to be the combination union with liberty of other races and other communities to develop within it. There is also a careful summary of the diplomatic correspondence immediately preceding the war, and a reprint of Sir Edward Grey's speech in the House of Commons on the day before war was declared. [Published by the Macmillan Co.; price, 60 cents.]

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THE EDUCATIONAL REVIEW,

St. John, N. B.

"Children of the Empire: Why are we fighting? Because the British Empire does not break its promises, nor will it allow small nations to be bullied."

This is a quotation from the message sent by Field-Marshal Earl Roberts to children in all parts of the British Dominions, on his 82nd birthday, in response to a request from the League of the Empire for a statement of the reasons for the war that young children could understand. The message is published by the League in the October number of the Federal Magazine, and also

printed, with a portrait of Lord Roberts, and flags of the Allies, on a wall-card (12¼ x 9¾ in., price 2d.) which is for sale at the offices of the League of the Empire, 28 Buckingham Gate, Westminster, London, S. W.

The *School World* for October prints a letter from Mr. Joseph Pease, Minister for Education, addressed to "My Colleagues in the National Service of Education," which should appeal to teachers throughout the Empire. The following words seem to us especially worthy of our most careful attention:

"Especially can pupils of every age be trained to feel, as the teachers must be feeling, that this is above all a time for the most exact, punctual and willing discharge of every duty of daily life at home or at school. Our daily work, whatever it may be, must be carried on with the same steadiness and devotion, the same resolve to be contented with nothing but mastery in the task assigned, as are expected from our comrades and fellow-country-men on service at sea or in the field. We must be worthy of them. Readiness to spend and to be spent in the common cause is the great lesson of war, and if it is thoroughly learned in our schools today, it will be a source of strength to our country for generations to come. Let us stand together; let us demonstrate the solidarity of all who work for education, and manifest, in the most constructive and most fruitful of the services of peace, the fraternity of the fighting line.

The attention of New Brunswick teachers is called to the official notices on page 123, and to the report of the High School Teacher's Association on page 111, of this issue.

In answer to a request from Nova Scotia for help in Grade XI literature, notes on *Julius Caesar* will be given in our December number.

Teachers who are planning their Christmas programmes will welcome Mrs. Lawrence's helpful suggestions for Christmas music.

NATURE STUDY OF ANIMALS.

H. G. PERRY.

Beetles.

In Fig. 1, is pictured one of our ladybird beetles. Several different species of ladybirds are often seen on warm days, even as late in the year as this, around gardens and fields, and even



Fig. 1. The nine-spotted ladybird-beetle,—adult and larva.

about our houses. They are all much alike in general shape, vary but little in size, and in color are generally red or yellow with black "polka dot" spots, or black with white, red, or yellow spots. The number of spots varies according to the species, one of the most common having two black spots and red wing-covers, but some having as many as fifteen spots are frequently found.

Collect ladybirds. How many species do you find in your locality? Do not hold them prisoners very long, for they are on a very important mission at this time of year—that of selecting a home for the winter. These beetles hibernate during the winter in cracks and crevices around trees, stumps, fences and buildings. Account for their presence in our houses during the fall and winter. The writer has frequently found specimens flying about his study on winter evenings.

All the grades should receive instruction in the identification, the life habits, and the beneficial work of ladybirds. To make pupils familiar with these little creatures is to make sure of their interest, sympathy and protection. Some housekeepers also should receive instruction, for it is a common error to classify ladybirds, when found in the house, as "buffalo bugs" and to treat them accordingly.

In the October REVIEW, reference was made to the work of ladybirds in preying upon aphids,

plant lice. It may be of interest to know that an Australian species, imported some years ago, has saved the orange groves of California, through its power to keep in check the cottony cushion-scale; and at the present time experiments are being made to combat the San Jose scale with an imported Asiatic ladybird. The larva of the ladybird is seldom found at this time of year, but was common all through the summer and autumn on plants infested with aphids or other insects upon which it preys. A twig of any plant covered with aphids in June or July, will be likely to show ladybirds in all stages; the familiar form of the adult beetle, and the clustered yellow eggs; the alligator shaped larva, with its red or yellow spots and warty spines, and the angular pupae suspended from leaves and twigs by their tails. Take this as a suggestion for summer nature-study.



Fig. 2. European ground-beetle (*Calosoma sycophanta*) imported to prey on the gipsy and brown-tail moths.

Ground-beetles also are to be numbered among beneficial insects, and are of special value in protecting our gardens. They are shy insects and are often found in hiding under stones, bits of boards, rubbish and leaves. When exposed, note how rapidly the larger long-legged beetles get away. They are well fitted for chasing and capturing smaller insects upon which they prey. The larvae are also predaceous, and are said to feed on cutworms.

The Searcher (*Calosoma scrutator*) is our

largest species, and closely resembles the *Calosoma*, in Fig. 2.

The European species, shown in Fig. 2, has recently been imported into America to prey upon the gipsy, and the brown-tail moths.

Another species, the "Fiery Hunter" (*C. calidum*), is often found at this season of the year in rotten stumps and logs, and is readily distinguished by rows of small reddish or copper colored pits arranged lengthwise on the wing-covers.

Many interesting beetles are found in our ponds and streams. The small whirligig-beetle is too well known to need description. They are somewhat social in their habits, and are always found either darting around and around each other, or resting motionless on the surface of the water. When closely pursued, they dive and scatter in all directions.

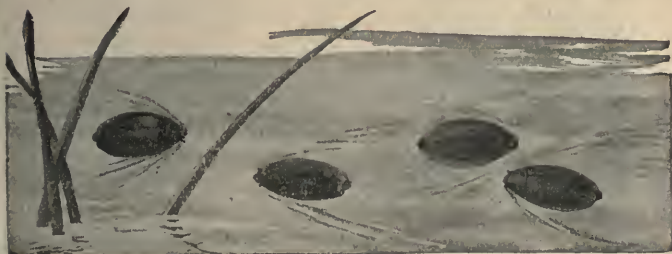


Fig. 3. Whirligig-beetles, Gyrinidae. (About natural size);

They are easily taken in a dip-net, but hard to catch with the hands. Capture some and note the peculiar odor they give off, when handled. If kept in an aquarium, it must be covered with cheese cloth, otherwise they will fly away. In their natural habitat they feed on the small insects that fall into the water. Supply your aquarium with similar food and note the result.

Another and larger form, the predaceous diving-beetle, *Dytiscus*, is more often found in pools of standing water, than in streams. When at rest they suspend themselves at the top of the water with the tip of the abdomen at the surface; this enables them to draw air under the wing-covers, where the breathing pores are situated. Note the position of the breathing pores, in the different families of insects you have studied.

From an aquarium specimen, determine whether these insects breathe air or water.

The *Dytiscus* is a representative of the great

family of water-beetles, Dytiscidae (*Dy-tis'ci-dae*); nearly 300 North American species are known.

The Dytiscidae are usually brownish black and shining. The commoner species range from one half to three-quarters of an inch in length, while the largest are about an inch long. They all have thread-like antennae; the hind legs are the longest, and are fitted for swimming, being flattened and fringed with hair.

These insects are very voracious, preying on other insects, and at times even on small fish. In the aquarium, they can be fed on any kind of meat, raw or cooked. The larvae are ferocious, elongated, spindle-shaped grubs, which, on account of their bloodthirstiness, have been called "water-tigers."

The water-scavenger beetles (*Hyd-ro-phil'i-dae*) form another family of beetles; found mostly in quiet pools. They closely resemble the predaceous diving-beetles, but are easily distinguished in the water by a film of air under the abdomen, which gives their under surface a silvery appearance. The wing-covers are more highly polished, and the body more flattened below and more convex above than in the diving-beetles. They are also distinguished by their club-shaped antennae, and long palpi. These palpi are often mistaken for the antennae, which are usually concealed beneath the head.



Fig. 4. The diving beetle, *Dytiscus*. (Slightly enlarged).

The scavenger-beetles feed on decaying vegetable and animal tissue and also on small, living animals; the larvae are said to feed entirely on living forms, such as insects, snails, tadpoles, etc.

About 150 species belonging to this family are found in North America.

Representatives of both these families are readily secured by sweeping the bottoms of ponds with a dip-net. They make good subjects for school study, and can be kept in aquaria, covered with cheese cloth, for a long time, when properly supplied with food. When free in nature, they fly from pond to pond and are frequently found near electric lights in towns and villages.

The adult form of the May-beetle or June-bug, as it is called in some localities, is too well known to need further description. Fig. 5 is given to illustrate its life history. Note the shape and position of the larva in its little underground home. These larvae are the well known white grubs, often turned out by the plow. They feed on the roots of grass, corn and garden plants, but the adult is said to feed at night on the leaves of various shade and fruit trees. The pupal stage is also passed underground. Dig in garden earth for larval and pupal forms. The adult form, quite inactive, is often found in the ground, during spring and early summer. Is it likewise found in the fall?

Compare the life history of the May-beetle with that of another familiar beetle, the Colorado potato-beetle.

How many stages are present in the life cycle of the potato-beetle?

How do these compare with similar stages of the May-beetle?

In what form does each of these beetles pass the winter, and where?

These and other questions from the teacher, if properly answered, will tend to develop this line of work and bring many happy surprises to the interested teacher.

The insects mentioned in this article belong to the order Coleoptera, (Gr. *koleos*, sheath: *pteron*, wing). They all agree in possessing hardened sheaths to cover the hind wings (hence the name), and biting mouth-parts. The Col-

optera are true beetles, not "bugs." In their life cycle, they undergo a complete metamorphosis; their larvae are called grubs.

The Coleoptera is a large and important order; there are said to be about twelve thousand species in North America, north of Mexico. We find a representative of the order, the sacred beetle, the *Scarabaeus* of the ancients, carved



Fig. 5. May-beetle, showing larva (or white grub), pupa and adult. (Natural size).

on the monuments of stone of ancient Egypt, and history tells of the important part it played in the religion and symbolism of that country. And in our own day, we have hardly begun to compute either the harm or the benefit, arising from the habits of the various species of this order, to the agricultural and other industrial operations of our country.

[The cuts in this article have been copied from *Elementary Entomology*; Sanderson and Jackson; and *General Zoology*, Linville and Kelly, through the permission of their publishers, Messrs Ginn & Company, Boston, Mass.

SURE OF THE "PEP."

A laborer in one of our plantations a few days ago went up to one of the overseers and in a serious manner, which evidently showed that he was really seeking enlightenment, said in his local vernacular, which we cannot attempt to reproduce: "Massa, is it true that before the war the Kaiser sent a bag of rice to King George and told him, 'King George, I got as many soldiers as they is rice in the bag,' and that King George sent the Kaiser a bottle of nigger peppers and tell him: 'I only got as many soldiers as is in this pepper bottle, but you just bite one and then you'll see if your soldiers like these?'"—*Barbadoes Standard*.

MATERIALS TO AID NATURE TEACHING.

L. A. DEWOLFE.

Some of the questions asked in the apple article last month have puzzled a few readers. Teachers have asked for answers to three or four of these questions; but I shall wait another month to see if more inquiries are made. Then, I shall answer all at once, through the REVIEW.

One teacher asks if it would be possible for me to begin a series of questions and answers on botanical topics in the REVIEW, similar to those published two years ago. Certainly. But why won't the teachers themselves ask the questions? I believe the REVIEW can be made extremely helpful if all will take part in asking questions or reporting their experiences.

Instead of asking questions in this article, may I suggest ways that might make nature work mean more to our school children? All will admit that geography and nature work are really one subject. Physical geography treats of the earth, the stars, the planets, mountains, rivers and lakes, a hundred and one things, all of which are natural. The word itself implies nature study. Commercial geography treats of our control of natural powers and our use of natural objects. Our nature work, then, can effectively link itself with geography.

For example, a child may be asked to name the minerals of his province. As such, the question is useless. If, however, some object in the school room suggests a discussion of minerals, their location, manufacture and use, the question may be a very attractive one.

Possibly the iron nails in the floor would bring up such questions as the countries in which iron is found, the condition in which it is found, how it is mined, how it is smelted, things manufactured from it, methods of transportation, by-products of its manufacture, the galvanizing of iron, etc. Doubtless all teachers bring up these topics. But, too often, the topics are named without their making any impression on the child's mind.

Would it not be wise to have the following material in the school room to illustrate iron and its products? Have the children make maps showing the distribution of iron ore in workable quantities. With advanced grades, these would be world-maps. With the middle grades, they

should be provincial maps. Have samples of magnetite, hematite, limonite and siderite. Beside them, have pig iron, wrought iron and steel. Have, also, pictures of blast furnaces and open hearth furnaces in order to help explain the process of manufacture. Have, also, pictures of iron mines. Have the children make lists of things made of iron. As their knowledge increases, they will add to this list. Get pictures of steamers and trains carrying iron ore or iron products.

Children who like manual training might make a cardboard model of a blast furnace. Sample of coke and limestone or dolomite are also necessary, since these are used in the smelting. Slag, too, should be in the collection, and with it could be a small bag of cement and of fertilizer; thus the children learn that the waste from one operation may be profitably used in some other industry. They will learn, too, how closely industries depend on each other.

In the collection of raw materials, include red ochre and yellow ochre; and with them, exhibit a piece of wood that had been painted with paint, made from these ochres. A can of ochre paint would be more real still. Have also some dyes made from iron salts.

A cube of iron pyrites is interesting on account of its crystallization. To call it "fool's gold" may be suggestive. But to exhibit with it a bottle of sulphur, with pictures showing how sulphur is manufactured from iron pyrites, brings it in contact with affairs of real life, rather than leaving it an isolated object on a museum shelf. But even the object on the museum shelf means infinitely more than the printed word of doubtful pronunciation in the text-book. With the pyrites and the sulphur, put a bottle of sulphuric acid. Then is pyrites valuable?

It may be urged that to follow this method, one never reaches the end. That everything suggests something else, and requires something else to illustrate it. That is one of its strongest points. There is only one nature. The teacher who can link all knowledge together, instead of dissecting it into unrelated fragments is certainly on the right road.

What a fairy story is suggested when I dip my steel pen into ink! Our iron collection might have contained some green vitriol — a salt of iron. A piece of black leather and a bottle

of ink might illustrate two of its uses. The teacher with a good imagination might picture a fragment of iron being broken apart in some far-off land; the separate pieces being loaded on different vessels; taken to different ports; manufactured into different compounds; until at last, like Evangeline and Gabriel, after many wanderings they meet. But how changed they are! I wonder if the part that became a pen recognizes its mate in the form of ink? Chemistry is full of fairy stories.

All the material named here is used in connection with one topic—iron. Every other topic will require more or less material. Try collecting it and see if school work won't go better. Report your successes and failures to the REVIEW.

CENTENNIAL ANNIVERSARIES OF THE WAR OF 1812.

J. VROOM.

XXVII.—*The End of the Last Invasion of Upper Canada.*

November 17.—The Canadian War of 1812 may be said to have ended in November, 1814. The later fighting in Louisiana and Georgia was practically another war, in which Canadians were not directly concerned. Its principal events, the defeat of the British at New Orleans and their subsequent victory at Mobile, took place after the treaty of peace had been signed in Belgium, though before it was ratified by the United States. This was long after actual warfare had ceased in Canada. Nominally, the war began when President Madison issued his declaration, on the nineteenth of June, 1812; and it ended nominally when he agreed to the terms of peace, on the eighteenth of February, 1815. Yet, in so far as it involved encroachments on Canadian territory, the war really began with the first invasion on the Detroit frontier, and at the Detroit frontier it ended.

As already noted, after Perry's victory had given him control of Lake Erie, the western peninsula of Upper Canada was exposed to raids. The worst of these, perhaps, was Campbell's raid, in May, 1814, in which he plundered and burned the village of Port Dover. But the last, and the most daring, was MacArthur's raid.

Leaving Detroit on the twenty-second of October, and going up the western side of Lake St. Clair, MacArthur crossed the St. Clair River and entered Canada on the twenty-sixth. By the thirtieth, he had reached Moraviantown, burning and plundering as he went. On the fifth of November he was near Grand River. There he soon learned that a British regiment had been sent from Niagara to intercept him; and also that General Izard had abandoned Fort Erie and retreated to United States territory; whereupon he hastened back to Detroit by another route, his course, we are told, still marked by wanton devastation and indiscriminate pillage. He reached Detroit on the seventeenth; the last invaders, as it happened, thus quitting Canada where the first had entered.

With his departure, active hostilities in Canada ended. Amherstburg was still held by a garrison placed there in 1813. An attempt to dislodge them was to have been made in the spring of 1815; but before that time came, the war was over.

A few words will sum up the situation as it stood when MacArthur and his Kentucky rangers had left the country. The fierce though intermittent warfare along the New York border had come to an end very suddenly when the strengthening of Yeo's fleet and the arrival of British and foreign regiments from Wellington's army had given the Canadians adequate protection. Then, as always, it was seen that the most decisive victories may be those not won in battle. When an army or a navy is too strong to be attacked, its work is already done; when too weak to resist, it is already vanquished. Apart from the occupation of Eastern Maine, there had been no war east of Lake Champlain, for Vermont and Maine were friendly states. In the west, where the war began and ended, there had been the greatest suffering though not the heaviest fighting. There, also, the incursions ceased with the strengthening of the British forces. From Lake Champlain westward, when the fighting along the border ceased, the British held all their own territory excepting Amherstburg, with one post in New York State and one in Michigan, both of which were to be lost by the peace. Next month we shall consider briefly what the peace meant to the people of British America and to all concerned.

NEW BRUNSWICK HIGH SCHOOL TEACHERS' ASSOCIATION.

To all Teachers in the Province of New Brunswick.

GREETING:

There is nothing new under the sun, and even an organization, of and for teachers, is not novel. But, unlike the brook, with the coming and going of teachers these Associations have come into existence, exerted an influence and have decayed. The torpedo — 'non-support,' by name — has foundered many well-launched Associations, and it was not without some fear that a few teachers embarked on an enterprise similar in nature to that attempted a few years ago. A notice of the formation of the New Brunswick High School Teachers' Association appeared in a recent issue of the REVIEW.

At the first regular meeting of the Association the following Constitution was adopted:

1. NAME: The name of this organization shall be "New Brunswick High School Teachers' Association."

2. MEMBERSHIP: All teachers holding Superior or Grammar School licenses are eligible for membership.

3. AIM: The purpose of this Association is to promote the best interests of the teachers of N. B. The following platform has been adopted as primary aims of the Association:

(a) Equal salaries from School Boards for male and female teachers.

(b) A higher standard for Superior License.

(c) An annual increase of salary to a teacher, who remains in a district, until a minimum of one thousand dollars per annum has been reached — this sum to include provincial and local grants.

4. OFFICERS: The officers of this Association shall be President; Vice-President; Secretary-Treasurer. These officers shall be elected biennially, unless they sooner resign or become disqualified.

5. EXECUTIVE: The Executive shall consist of the Officers and one Associate Secretary for each Inspectorate. These are to be appointed biennially unless they sooner resign or become disqualified.

6. Should any vacancy occur in the Executive during its term of office, the remaining members of the Executive are given power to make any appointments.

7. FEE: The membership fee shall be \$1 00 per year to be paid not later than October 1st.

8. MEETINGS: (a) The Association shall meet biennially at the time and place of the Provincial Institute.

(b) All members of the Association, teaching in any county, shall meet at the time and place of the County Institute, such meeting to be presided over by the Associate-Secretary of the Inspectoral district or some one duly appointed by the Executive.

(c) The Executive may call a special meeting of the Association at a month's notice.

9. It shall be the duty of the Executive:

(a) To obtain a list of all Superior and Grammar Schools in the province, together with salary paid last teacher. Such list to be available at any time by any member of the Association.

(b) To make such arrangements for advertising and promoting the Association as they deem advisable.

10. No member shall accept a school at a salary lower than that paid to the previous teacher; but any school which provides a regular increase in salary due to experience and time of service in the district shall be excepted.

A few words of explanation may be of interest. It will be noticed that all teachers, holding superior or Grammar School licenses, are eligible for membership, whether such teacher is teaching high school pupils or not. In this practical age, the watchword is "value for value," and a teacher has a right to expect some return for the dollar asked for as membership fee. Any teacher, ambitious enough to prepare the work necessary to pass superior license examinations, will probably carry the same spirit through all her work. It is the aim of the Association to procure lists of the best available positions, and to keep such list for the exclusive use of the Association members. The Executive will procure this information as early as possible from various agencies, that its members may have the advantage, of time, at least, when presenting applications. Section three has been worded in the Constitution so as to include a great scope of work, and sub-sections will be added from time to time.

For teachers doing high school work, certain definite aims have been adopted: Section 3, sub-section (c). We must recognize that one reason why we are not ranked as professional men and women is that we are so unprofessional in our business methods. The detestable practice of under-bidding, far too prevalent even in New Brunswick, may be due to many causes. We would like to think that one reason for this is a lack of knowledge of salary paid previous teacher. This we plan to make unnecessary: (Section 9, sub-section (a)).

If salaries are to be placed on a permanent basis, the teachers must be the agents. Hence we have adopted section 10. But, as it is manifestly fair that an experienced teacher is worth more than an inexperienced one, generally

speaking, it has been seen fit to permit the exception in section 10.

If a lady teacher is capable of teaching and disciplining a school, as efficiently as a man, she should receive an equal remuneration. This is the principle referred to in section 3, sub-section (a). With living expenses equal, and with identical work, we fail to see any reason or excuse for unequal salaries.

Section 3, sub-section (b), will show that we are not a combine. We believe we are not, as a whole, receiving sufficient salaries, but we also believe in making our work more efficient, hence more valuable. We advocate a higher standard for superior license, believing that the increased salary justifies this attitude.

Space will not permit me to enlarge on the reasons for undertaking to organize all eligible teachers into one body. We are facing greater educational, social and political changes than any of us realize. How necessary at such a time, with a curriculum changing so rapidly, constantly enlarging, with the demand for a more practical training for the child, with the necessity of the teacher's view, being national,—yea, international, facing the problems the teacher must face after the present crisis,—how necessary that at least a Provincial Association of the teachers be formed, and that it be aggressive and progressive. Later, if considered advisable, teachers holding lower classes of license might be enrolled as members, but the Executive feels compelled to limit its membership, as yet.

OFFICIAL NOTICES.

The Secretary-Treasurer acknowledges with thanks, the receipt of membership fee from following teachers: J. H. Barnett, Hartland, N. B.; J. C. Hanson, Riverside, N. B.; Zula V. Hallett, Marysville, N. B.; Jennie M. Steeves, Hillsboro, N. B.; Ronie A. Long, Riverside, N. B.; C. T. Wetmore, Kingston, N. B.; Geo. W. Chapman, Hillsboro, N. B.; H. Dell McAuley, Elgin, N. B.; Winnifred Clark, St. Stephen, N. B.; Mary Gillin, Woodstock, N. B.; L. R. Hetherington, Newcastle, N. B.; Geo. G. Perry, Petitcodiac, N. B.; W. H. Elger, Moore's Mills, N. B.; Frank S. Keirstead, St. Martins, N. B.; A. B. Brooks, Apohaqui, N. B.; E. D. MacPhee, Sackville, N. B.

All members of the Association are solicited by the Executive as subscribers to the EDUCATIONAL

REVIEW. Very courteous assistance has been given by the editors, and in addition to its already interesting articles they offer space where matters pertaining to the Association will be discussed.

The Executive appeals to all eligible members to unite at once with this Association. Recognizing its function, knowing the need, will you not join our ranks, and as a body, work for common aims? Send your membership fee to local Secretary, or to me. All receipts will be acknowledged both by private receipt and in the press.

E. D. MACPHEE,
Secretary-Treasurer.

Sackville, October 29, 1914.

"Let us keep in mind our patient and indomitable seamen, never relaxing for a moment their stern vigil on the lonely seas. Let us keep in mind our gallant troops who today, after a fortnight's continuous fighting, under conditions which try the metal of the best army that ever took the field, maintain not only an undefeated, but an unbroken front. (Loud cheers.) *Finally, let us recall the memories of the great men and the great deeds of the past.* Let us not forget the dying message of the younger Pitt in his last public utterance in this Guildhall itself, 'England has saved herself by her exertions, and will, as I trust, save Europe by her example.' The England of those days gave a noble answer to his appeal, and did not sheath the sword until, after nearly twenty years' fighting, the freedom of Europe was secured. Let us go and do likewise." (Loud and prolonged cheering.

— *From Premier Asquith's Guildhall Speech, September 4th, 1914.*

THE HOME GARDEN.

The British Board of Agriculture has advised the householders of Great Britain to utilize every foot of spare land in the planting of gardens for next year, to supply as far as possible their own garden produce. In this way they can assist in relieving any shortage which may develop on account of war conditions.

This suggestion is of equal importance to Canadians. Attached to nearly every home are pieces of ground which at present are merely waste land. With little effort these may be converted into productive gardens. It requires very little space for a garden that, with ordinary care, will supply an average household with vegetables. By cultivating the available ground many Canadian families can reduce their living expenses, and, at the same time, secure vegetables which are absolutely fresh.

NOTES ON HIGH SCHOOL LITERATURE.

A CHRISTMAS CAROL.

People may or may not like Dickens' books, but no one can escape him. The world he made has come to be a part of the world we all live in — *St. Nicholas*, February, 1912.

Bearing this truth in mind, the teacher should do his best to make *A Christmas Carol* serve as a gateway to the world of Dickens. Extracts from his other books should be read to the class and recommended for home reading. Those teachers who know and love Dickens will need no advice on this point, but for the guidance of others we suggest the following:

From *Martin Chuzzlewit*. Ch. 36: Tom Pinch's ride to London. "Really it might have confused" to "is in London." Ch. 15: The ship, to "unfathomable depths below."

From *David Copperfield*. Ch. 3: Yarmouth; to "if anything did happen." Ch. 4: Lessons; from "Shall I ever forget" to little "village alehouse." Ch. 5: Mr. Barkis. The dinner at the Inn. Ch. 7: School; to "such a recommendation." David's Visitors; from "One afternoon" to "refusing to confess." Ch. 12: David runs away; from "Being a very honest little creature" to end of Ch. 13. Ch. 55: The storm, from "In the evening I started" to "stilled forever."

The first four chapters of *Great Expectations* in full, or with slight eliminations. Ch. 7: to "yet in its infancy."

From *Pickwick Papers*. Mr. Winkle's Ride. Ch. 5: from "Mr. Pickwick had made his preliminary" to "led the way to the kitchen." Mr. Pickwick intervenes. Ch. 16: "What sort of place have you got?" to "my name ain't Weller." Mr. Winkle's shooting. Ch. 19: to "and billeted nowhere." Mr. Winkle on skates. Ch. 30: "Now," said Wardle," to "the smallest agitation." Christmas at Dingley Dell. Ch. 28: to "frolic and laughter," and from "the best sitting-room" to "a cheerful tint on every face."

The life of Dickens is full of interest. Points to be dwelt on are: The hardships of his childhood; his delight in story books (see *David Copperfield*. Ch. 4); his ambitions; industry; friendliness and kindness; love of children and devotion to his own children; wide sympathies; delight in Christmas and the Christmas spirit; the number of characters he has created ("it is hard to think of a world with all the Dickens' characters left out of it").

To illustrate the latter point, a list may be made

of some of his best known characters, and different members of the class called upon to report upon each one, naming their distinctive qualities. *e. g.* What do we mean when we say "a Micawber? a Sairey Gamp? a Pecksniff? a Mrs. Gummidge?"

In reading "A Christmas Carol," as in reading any other narrative, the first care should be to see that the readers can give the incidents of the story in proper order. After Stave One has been read, pupils should be called upon to do this.

The first ten paragraphs introduce us to Scrooge and Marley, and describe the former's character. Note the force of the repetition of the word "sole" in paragraph four. The movement of the story begins with "once upon a time." Why is the cold and dismal weather dwelt upon? Notice how the three interviews bring out Scrooge's characteristic attitude towards (a) his relatives, (b) his clerk, (c) the poor. Where does the first hint of the ghostly part of the story come in? What is the main point on which the ghost insists? Take this in connection with the opportunities rejected by Scrooge in the three interviews.

Note Dickens' frequent personifications. *e. g.* "As if nature lived hard by;" "When it was a young house;" and particularly the way he writes about weather.

With "the air was filled with phantoms, etc.," compare Horatio's speech to the ghost in *Hamlet*.

In Stave Two, notice; in the three scenes from Scrooge's past, (a) his loneliness as a child. (Where does he find companionship? *cf.* *David Copperfield*); (b) his enjoyment of a happy social life; (c) what separates him from his fellows, and prevents him from forming a closer tie. "Another idol has displaced me." Also the comment on his life, "Quite alone in the world."

What is the significance of each detail of the appearance of the ghost of Christmas Past?

In Stave Three. Note: (a) The contrast of the gloomy weather and the cheerful people; (b) the dwelling on good things to eat; (c) the many instances of friendliness and good cheer and companionship, elaborated in the description of the households of the Cratchits and Scrooge's nephew.

In Stave Four. Pick out a phrase or a speech which sums up the cause of Scrooge's miserable death. Study the effect of contrast within this stave, and also the contrast between it and Stave Three.

In Stave Five. Note the change of weather;

note that the change in Scrooge is not only from meanness to generosity, but from hating and avoiding his fellow men to loving and seeking them. Give instances of this. Compare the following sayings:

1. A pure or holy state of anything is that in which all its parts are helpful and consistent. The highest and first law of the universe and the other name of life is therefore "help." The other name of death is "separation." — *Ruskin*.

2. Farewell, farewell, the heart that lives alone
Housed in a dream, at distance from the kind;
Such happiness, wherever it be known
Is to be pitied, for 'tis surely blind. — *Wordsworth*.

The teacher may also find a study of Tennyson's *Palace of Art* interesting in this connection.

Throughout the reading, the teacher should have in mind Dickens' avowed purpose in writing the story, "in a whimsical kind of mask, which the good humour of the season justified, to awaken some loving and forbearing thoughts never out of season in a Christian land." He makes this appeal to the feelings, not by exhortations, but by presenting a series of pictures. This is true also of his books written with the purpose of awakening people's minds to some existing evil, such as *Nicholas Nickleby* and *Bleak House*.

In studying the bits of description in the book, attention should be drawn to these points:—(a). The use of the concrete and detailed; e. g., in Stave Four, the descriptions of the different shops; (b) The use of personification, before referred to; (c) The discriminating use of adjectives; e. g., the description of Scrooge in Stave One. cf. with the description of the ghost of Christmas Present, Stave Three. Short descriptive passages from other books should be read, e. g., Mr. Creakles' schoolroom, in *David Copperfield*; The Six Jolly Fellowship—Porters, in *Our Mutual Friend*, Ch. 6; Silas Wegg and his stall, Ch. 5; A spring evening in London, Ch. 12; Mr. Boffin, Ch. 5, in the same book.

If, in the reading of Stave One, parts are assigned, and the different conversations read dramatically, it will give variety; and an excellent composition exercise would be to dramatize the scene at the Cratchits, beginning where the two smaller Cratchits rush in. Other composition subjects:—The conversations that might have taken place between: (a) The two portly gentlemen, after Scrooge refused his contribution; (b) Dick and Ebenezer, before and after the Christmas dance; (c) Bob

Cratchit and Tiny Tim, on their way home from church; (d) The two men in the lighthouse. 2. Descriptions of:—(a) The plump sister; (b) Topper; (c) Peter Cratchit; (d) The room "not very large or handsome, but full of comfort." 3. (a) Christmas Eve at Home; (b) How I like to spend Christmas; (c) A kind old gentleman (anecdote); (d) Getting ready for Christmas (at school, in the kitchen, in Sunday School, at the Church). 4. (a) The child, Charles Dickens; (b) The House at Gad's Hill; (c) How David Copperfield learned to write shorthand; (d) How Pip fed the Convict; (e) Paul Dombey and Mrs. Pipchin; (f) Mr. Peggotty's House; (g) The Marchioness (in *The Old Curiosity Shop*); (h) Sloppy and the Minders (*Our Mutual Friend*); (i) The Kenwigses Study French (*Nicholas Nickleby*); (g) Grip, the Raven (*Barnaby Rudge*).

Passages to be memorized:

Stave One, from, "But I am sure" to "God bless it."

Stave One, from, "Any Christian spirit" to "usefulness."

Stave Two, from, "They walked along the road" to "laughed to hear it."

Stave Two, from, "In came a fiddler" to "anyhow and anyhow."

Stave Two, from, "He has the power" to "cost a fortune."

Stave Three, from, "They stood upon a bleak" to "darkest night."

Stave Three, from, "Looking back" to "undermine the earth."

Stave Four, from, "Oh, cold, cold," to "life immortal."

Stave Four, from, "I will honor" to "that they teach."

Stave Five, from, "No fog, no mist" to "glorious."

[Miscellaneous questions on *A Christmas Carol*, and on Dickens' life and works will be given in the December number. Some useful illustrative material and information will be found in the REVIEW for February, 1912].

King Charles of Roumania is dead and is succeeded by his nephew, Prince Ferdinand. The new queen is a granddaughter of Queen Victoria. Under the late King, who as Prince and King has ruled over Roumania for forty-eight years, the country has made remarkable progress. His sympathies were with Austria and Germany in the present war; but his people, who claim to be of the Latin race, are more closely attached to Italy, and will probably be influenced by Italy rather than by either Austria or Russia, though their political relations with Russia are very friendly.

A FORM-MASTER.

Mr. Bull was a young master, and an international foot-ball player. Being one of the few members of the Staff at Eaglescliff who did not possess a first-class degree, he had been entrusted with the care of the most difficult form in the school—the small boys, usually known as the Nippers.

A small boy is as different from a middle-sized boy as chalk from cheese. He possesses none of the latter's curious dignity and self-consciousness. He has the instincts of the puppy, and appreciates being treated as such. That is to say, he is physically incapable of sitting still for more than fifteen minutes at a time; he is never happy except in the company of a drove of other small boys; and he is infinitely more amenable to the *fortiter in re* than to the *suaviter in modo* where the enforcement of discipline is concerned. Above all, he would rather have his head smacked than be ignored. * * * *

Having duly posted up the names and tender ages of his Nippers in his mark-book, Mr. Bull announced—

"Now, we must appoint the Cabinet Ministers for the term."

Instantly there came a piping chorus:

"Please sir, can I be-Scavenger?"

"Please sir, can I be Obliterator?"

"Please sir, can I be Window-opener?"

"Please sir, can I be Ink-slinger?"

"Please sir, can I be Coal-heaver?"

"Shut up!" roared Mr. Bull, and the babel was quelled instantly. "We will draw lots as usual."

Lots were duly cast, and the names of the fortunate announced. Mr. Bull was not a great scholar; some of the "highbrow" members of the Staff professed to despise his humble attainments. But he understood the mind of extreme youth. Tell a boy to pick up waste paper, or fill an ink-pot, or clean a blackboard, and he will perform these acts of drudgery with natural reluctance, and shirk them when he can. But appoint him Lord High Scavenger, or Lord High Ink-slinger, or Lord High Obliterator, with sole right to perform these important duties and power to eject usurpers, and he will value and guard his privileges with all the earnestness and tenacity of a permanent official.

Having arranged his executive staff to his satisfaction, Mr. Bull announced—

"We'll do a little English Literature this morning and start fair on ordinary work this afternoon. Sit absolutely still for ten minutes, while I read to you. Listen all the time, for I shall question you when I have finished. After that you shall question me—one question each, and mind it is a sensible one. After that, a breather; then you will write out in your own words a summary of what I have read. Attention!"

He read a hundred lines or so of *The Passing of Arthur*, while the Nippers, restraining itching hands and feet, sat motionless. Then followed question time, which was a lively affair; for questions mean marks, and Nippers will sell their souls for marks. Suddenly Mr. Bull shut the book with a snap.

"Out you get!" he said. "The usual run—round the Founder's Oak and straight back. And no yelling, mind! Remember, there are others." He took out his watch. "I give you one minute. Any boy taking longer will receive five thousand lines and a public flogging. Off!"

There was a sudden upheaval, a scuttle of feet, and then solitude.

The last Nipper returned panting, with his lungs full of oxygen, and the fidgets shaken out of him, within fifty-seven seconds, and the work of the hour proceeded.—*From "The Lighter Side of School Life," by Ian Hay in Blackwood's Magazine.*

WESTMORLAND COUNTY TEACHERS' INSTITUTE.

One hundred and twenty teachers enrolled at Sackville on October 8th, for the Annual session of the County Institute. Mr. McPhee, Principal of the Sackville schools, acted as chairman.

Not only was the attendance excellent, but the meetings were marked by the interest of the papers and the vigour of the following discussions: The Teaching of Civics received much attention, being introduced by a paper, written by Mr. R. B. Wallace, of the Education office, and read by Inspector O'Blenes, and followed up by speeches from Miss McSweeney, Principal Oulton, Mr. J. A. Edmonds, and Mr.

W. McL. Barker. The speakers all advocated strongly a more thorough teaching of respect for constituted authority, the right and duties of citizens, and the inculcation of a higher standard of morals in public affairs. The discussion on school gardening also took a very practical form. Mrs. Henry Renton, whose school, McQuades, Parish of Moncton, won the prize, \$12.00, for this work, reported in an interesting way her own experience with a school garden, and much useful information was drawn out by pertinent questions, from both Mrs. Renton and Director Steeves. The latter also gave a fuller address on Friday morning on this subject, again responding to questions arising out of his address.

The paper read by Inspector O'Blenes on "How to Study," was largely an abstract of Professor McMurray's book on this topic, which the Inspector recommended to the teachers, and contained much valuable instruction. Other papers of interest were those on "Geography," by Miss Helena Steeves of Moncton, and on "Incidental Teaching," by Miss Ryan of Petitcodiac. Miss Eleanor Robinson, editor of the REVIEW, addressed the Institute on the teaching of English Literature in the lower grades.

On Thursday afternoon the members, by invitation of the town of Sackville, attended the Exhibition, and afterwards afternoon tea was served at the High School by the Sackville teachers. The public meeting on Thursday evening was exceptionally interesting, and largely attended by the townspeople.

Thoughtful and stirring addresses were delivered by Dr. J. M. Palmer, Rev. G. M. Campbell and others, and a paper on English in the schools was read by Mrs. A. H. McCready, of the Sackville Civic League.

The following were appointed to office for the ensuing year. President, Mr. E. C. Rice, Moncton; Vice-President, Miss Ryan, Petitcodiac; Secretary-Treasurer, S. W. Irons, Moncton; additional members of executive: Mr. E. D. McPhee, Sackville, and Miss Jessie McDougall, Shediac.

Havre, France, is now the seat of the Belgian government. It is a strange situation; but the move became necessary when Ostend, which became the temporary capital when the fall of Antwerp was foreseen, had also to be abandoned to the enemy.

THE SUMMER SCHOOL OF SCIENCE.

The following letter won first prize in the competition for the best letter on the Summer School session at Charlottetown in July of this year:

MR. S. A. STARRATT,

President Summer School of Science.

DEAR SIR:

As I contemplate the task of enumerating and setting down in order, the benefits of such an institution as the Summer School of Science, my heart shrinks. For am I not bound, if I attempt such a measure at all, to disentangle and analyze all the thoughts and feelings, all the different influences, that have been crowding thick and fast upon me, for three weeks, and clothe them in words suited to meet the public eye!

Standing out, foremost among the maze, I find the idea of mind influence. The question has recurred to me again and again, "Can it be possible for any one of us to remain for three weeks within the powerful circle of influence radiating from the minds of hundreds, who have spent years in direct contact with child life, without being drawn closer into that circle, and feeling its softening and refining power?" Surely our minds must respond in some degree to the many others, who have been doing the same work, facing and overcoming the same difficulties, and, to a certain degree, obtaining the same results, as ourselves.

Such is my opinion of the general influence of the Summer School of Science. But I must particularize. It seems scarcely necessary to mention the great benefits to be obtained from the excellent courses of lectures we have received from the various instructors; but, I would like to mention one phase of this work which particularly interested me. My personal experience, and probably that of many others, shows that in the suggestions made and the topics discussed during these widely varied lectures, we may find answers to questions that have been troubling us for months. For some time I have been wondering what is to be done, and what is already being done, to counteract the narrowing influence of the petty superstitions that are restricting the mental growth of our people. The query was aroused in my mind by the fact that these superstitions even interfered

with my regular school work, one of my pupils coming to me sadly perplexed, about bringing specimens for our flower calendar, because she feared it would bring misfortune to pick the first flower she saw of any variety. It was a pleasantly startling circumstance, that almost the first direct statement I heard on entering upon the work of the Summer School, was to the effect that nature study is a sure antidote for superstition. I think this fact should stimulate us to renewed effort and perseverance in the study of nature; for, how are we to enlighten minds that are confined and restricted, in every way, by constant dread of some blind fury ready to wreak its vengeance on them, for departing from rules that cannot show one atom of reason for their existence?

There are other advantages of the School, that are so obvious, it seems superfluous to write of them, but, at the risk of being tedious, I must pay my homage to my benefactors. I refer especially to the awakening course of evening lectures we have enjoyed. I say awakening, because, while listening to Miss Robinson's talks, I thought, 'There are surely none, no matter how young in the profession, who have not had some sweet sentiment, almost dormant — dormant because buried under the burden of daily routine — roused and inspired anew, with the breath of life, by her words.

I must not forget to mention the means of bodily development, and of social enjoyment that have been provided, and the excursions, so wisely planned. The city of Charlottetown, itself, is very attractive, and when there is added to it all the enticements of the Summer School of Science, I think no one can have, in any way regretted the three weeks spent within its precincts. I remain,

Yours very truly,

MARY E. HANINGTON,
Whitehead, Grand Manan, N. B.

We gladly publish this enthusiastic testimony to the influence of the Summer School of Science, believing that it will be echoed by many, who look back with gratitude to the stimulus that they have received at its meetings.

The practice of attending holiday courses is becoming more and more general, and the large attendance at the admirable special courses of training offered by the Government Rural

Schools during vacation, far from lessening the numbers at the Summer School of Science, has seemed to stimulate attendance there. The Summer School of Science has made its own place and will keep it.

We understand that plans are afoot for some re-organizing of the school in ways which past-experience suggests as advisable. In the hands of the president, Mr. S. A. Starratt, whose organizing skill and enthusiastic interest in the school have been proved, these plans are likely to succeed, and we hope that the future of the institution will be worthy of its past.

FERNS; AND A SUGGESTION.

To the Editor of the Review:

The September number of the REVIEW contained an article by J. Vroom, on "Rare and Local Ferns," which was greatly enjoyed.

For years the present writer has searched the woods for ferns and other woodland plants, and has often thought that our teachers might, through the REVIEW, form a "Nature Club," by the help of which the flora of New Brunswick and Nova Scotia could be better known and appreciated. Prof. L. A. DeWolfe, of Truro, is doing much to interest teachers in Nature Study, but the results of his efforts end in informing only the individual.

The individual searches the woods, finds a rare plant or fern, and no one else is the richer for it. Teachers would be benefited in many ways, physically and otherwise, by an active search for native plants; and, as said before, our flora would become known.

Mr. Vroom makes mention of the Maiden Hair Fern. To find it is certainly a delight. The writer has searched the woods for years to find it, but never had the pleasure of making its acquaintance until this fall. It was found, like those mentioned by Mr. Vroom, in a hollow in a butter-nut grove. Since then he has found it in other sections. It seems to be one of the commonest ferns here.

In his article Mr. Vroom speaks of the Holly Fern, and says that it is reported from one section of Cape Breton. Does Mr. Vroom mean *Aspidium Aculeatum*, variety *Braunii*, which is very rare, and is called by some writers the Holly Fern? If that is the one meant, the

writer found it many years ago at Point Wolfe, and Caledonia Mountain, Albert County. The late Dr. G. U. Hay found it on the Restigouche and later at the Plaster Quarries, in Hillsboro. It was also found at Foleigh Mountain in 1913, by one of the members of the Rural Science School, while we were on an excursion there. This fern is certainly very beautiful and worth looking for.

The Bulbet-bearing Bladder Fern is very common here, and is found in some sections of Albert County. Goldie's Fern is common here, but the writer has not found it elsewhere. Have others found it? The Royal Fern, in the writer's experience, has only been found in small quantities in three places, and he would like to hear from others who have found it. Have the Hart's-Tongue, *Asplenium trichomanes*, and Cliff-Brake been found in the Lower Provinces? If so, where?

A. D. JONAH.

Woodstock, N. B.

[Mr. Vroom writes that the Holly Fern mentioned in his article in the September number of the REVIEW is *Polystichum Lonchitis*, otherwise known as *Aspidium Lonchitis*, which has been found by Dr. McKay in considerable abundance near Aspey Bay, Cape Breton. *Aspidium Aculeatum*, var. *Braunii*, now known as *Polystichum Braunii*, was mentioned by the name of Braun's Shield Fern, under the head of Woodland Ferns, in the June number. The Hart's-Tongue has been reported as found near Woodstock, N. B., some years ago, but is not now known to exist anywhere in the Atlantic Provinces. *Asplenium Trichomanes* is the Maidenhair Spleenwort, mentioned in the September REVIEW. The following list is supposed to include all ferns now known in the lower provinces, the botanical names being those given in the latest edition of "Gray's Manual:"

1. Common Polypody — *Polypodium vulgare*.
2. Beech Fern — *Phegopteris polypodioides*.
3. Oak Fern — *P. Dryopteris*.
4. Maidenhair Fern — *Adiantum pedatum*.
5. Common Brake — *Pteris aquilina*.
6. Slender Cliff Brake — *Cryptogramma Stelleri*.
7. Chain Fern — *Woodwardia virginica*.
8. Green Spleenwort — *Asplenium viride*.
9. Maidenhair Spleenwort — *A. Trichomanes*.
10. Silvery Spleenwort — *A. achrostichoides*.
11. Lady Fern — *A. Filix-femina*.

12. Christmas Fern — *Polystichum achrostichoides*.
13. Holly Fern — *P. Lonchitis*.
14. Braun's Shield Fern — *P. Braunii*.
15. Marsh Shield Fern — *Aspidium Thelypteris*.
16. New York Fern — *A. noveboracense*.
17. Fragrant Shield Fern — *A. fragrans*.
18. Marginal Shield Fern — *A. marginale*.
19. Male Fern — *A. Filix-mas*.
20. Goldie's Fern — *A. Goldianum*.
21. Crested Shield Fern — *A. cristatum*.
22. Spinulose Wood Fern — *A. spinulosum*.
23. Bulblet Bladder Fern — *Cystopteris bulbifera*.
24. Fragile Bladder Fern — *C. fragilis*.
25. Rusty Woodsia — *Woodsia ilvensis*.
26. Alpine Woodsia — *W. alpina*.
27. Smooth Woodsia — *W. glabella*.
28. Hay-scented Fern — *Dicksonia punctilobula*.
29. Sensitive Fern — *Onoclea sensibilis*.
30. Ostrich Fern — *O. Struthiopteris*.
31. Royal Fern — *Osmunda regalis*.
32. Cinnamon Fern — *O. Cinnamomea*.
33. Interrupted Fern — *O. Claytoniana*.

The REVIEW would welcome the formation of a field botany club for the Atlantic provinces, which should have a separate local branch for each distinct botanical division of the territory, and should combine the work of a society for the suppression of plant collecting and a society for the study and protection of native plants. — ED.]

THE WAR AND THE CENTURY.

The *Century* magazine announces that, beginning with the November number, it will interpret to its readers what lies back of the bare facts of bulletin and dispatch.

In New York, W. Morgan Shuster, author of "The Strangling of Persia," and Samuel P. Orth, professor of Politics and Public Law at Cornell University, will write of the war and its effects from an ethnic and political point of view.

In London, James Davenport Whelpley, author of "The Trade of the World" and of recent *Century* papers on diplomacy, will deal with the personalities of the war lords and the spirit of the nations.

Estelle Loomis, the short story writer, now in Paris, will be sending *The Century* sketches of human interest.

Albert Bigelow Paine, author of "Mark Twain, a Biography," now in Switzerland, has put himself in touch with the German authorities with a view to presenting views of Germany in war time.

Albert Edwards, the well-known novelist and travel writer, is going to Europe with a roving commission from *The Century* magazine. His mission is to help build the literature that will grow out of the war itself.

CHRISTMAS CAROLS FOR SCHOOLS.

There are three little paper-covered books, price five cents each, which every teacher would find most useful. In ordering them, ask for Novello Edition of "CHRISTMAS CAROL SERVICES"—No. I., "Adeste Fideles;" No. II, "Christmas Bells;" No. III, "Bethlehem;" H. W. Gray Co., 2 West 45th Street, New York.

All High School pupils should know the traditional carols in No. I, viz:—"The First Nowell," "Silent Night," "Good King Wenceslas," and "God rest you merry gentlemen," as well as those beautiful words of Phillips Brooks, "O little town of Bethlehem."

In No. II, is the quaint old "Good Christian Men Rejoice," which all the children enjoy from Grade I up, although I would not teach it to Grades I and II, unless these little ones are to sing with the older pupils.

No. III contains one of the loveliest carols I know, "There came a little Child." It is suitable for all grades, and the children love it. To make a little variety, every other line of one verse may be sung by one voice, if there happens to be an especially good one in the school, or by three or four sweet voices. "Merrily rang the bells," in the same book, is very bright and attractive for all grades.

The Gray Company publishes also, "Long, long ago," and "Ring out the bells for Christmas," from *Christmas Carols and Hymns for Children*, price 5 cents, by Rev. J. S. B. Hodges.

"The Shepherds left their sheep," Novello Edition, 348, by Alfred Hollins.

The first of these is suitable for Grade I, the second for all grades, the third for older pupils or High Schools.

"Martin Luther's Hymn," price 5 cents, by Gertrude H. Swift, is another charming carol for Grade I, yet not too simple for all grades. I have heard it sung in church, by a professional soloist, to the delight of all listeners.

G. Schirmer, Boston Music Co., 26 West St., Boston, Mass., publishes the following attractive carols:

"This Happy Christmas Morning," by S. Archer Gibson.

"Beneath the Star-strewn Heaven," price 5 cents, from *Six Christmas Carols*, by Walter O. Wilkinson.

"Fling out, fling out your windows wide," by Walter O. Wilkinson.

"Everywhere Christmas Tonight," price 10 cents, from *Three Christmas Carols*, by Ethelbert Nevin.

Oliver Ditson and Co., Tremont St., Boston, Mass., publish some lovely carols, viz:—

"In the field with their flock," price 5 cents, from "Christ and His Soldiers," by Farmer.

"Ring Merry Bells," price 5 cents, from "*The Birthday of our Lord*," by Rosabel.

"Far on the hillside's grassy steep," by S. B. Whitney.

"O shepherds, shepherds," No. 1537, by Howard M. Dow.

"Carol, sweetly carol," No. 1269, by C. W. Whittaker.

Thomas Whittaker, 3 Bible House, New York, publishes a very bright carol, "Ring out the bells for Christmas," price 5 cents, by J. Mosenthal.

That loveliest of all Christmas hymns, "It came upon the midnight clear," set to the tune "Noel," as arranged by Sir Arthur Sullivan, and "Hark, what mean those holy voices," set to a tune by Henry Smart, should not be neglected, especially for the higher grades.

Will you bear with me if I put in a plea for *sweet* singing, not loud singing. The child whose forehead shows a dozen wrinkles is probably yelling, not singing, and the muscles of his throat are so contracted that nothing tuneful can be produced by that delicate organ.

The constant admonition, "sing easily" will in time prevent those ear-splitting sounds, which proceed from some school-rooms, and which possibly justify the complaint that many voices are ruined in the public schools.

In schools where the sight singing is not yet being taught it will take only five minutes after opening, every morning to sing, "Doh, Ray, Mi, Fah, Soh, Lah, Si, Doh, remembering that it is better for children's voices to begin at the high "do" and sing down the scale, singing each note a little more softly than the one preceding it. Repeat two or three times, then sing up the scale once, being *most* careful to lighten the tone, "easy, easy," as the voices rise. Try it for one month.

To one more point I crave your attention—pronunciation—especially the sound of "a" as found in the words "has" "can," etc. How many schools sing, "O Keanada! O Keanada," and "My

own Keanadian Home." The only cure I have found for this wiry sound, which seems fairly to bore through one's ears, is to practise the pupils in opening the mouth as widely as possible, while they say or sing the word very softly.

MARY VICTOIRE LAWRENCE.

WHO, WHAT AND WHERE.

SEARCH QUESTIONS FOR COMPETITION.

[Questions will appear in each issue from October to March. Marks will be given for correct answers, and in April a prize will be awarded. Answers to each month's questions will be given in the following issue. The competition is open to all readers. Answers must reach the REVIEW office not later than the first of the month. Write on only one side of the paper. Number the answers. Sign with initials or a pseudonym.]

NO. II.

CERTAIN POETS.

1. What poet says he only sings because he must?
2. What poet calls himself "the idle singer of an empty day?"
3. What poet laments that his one talent is useless?
4. What poet declares that in only one month in the year can he be tempted to leave his books?
5. What poet loved a river, because it reminded him of three friends?
6. What poet tells us in a sonnet, who are his favourite heroines?
7. What poet said that the name of a country was engraved upon his heart?
8. What poet thanks God that he was born in no mean city?
9. What poet said that he gave up writing poetry because another poet beat him?
10. What poet wrote or suggested his own epitaph?

[In (9), the names of both poets must be given. In all the other answers there must be full reference and quotation of context].

ANSWERS TO OCTOBER QUESTIONS.

1. The Battle of Dettingen, 1743, in which George II fought.
2. Ahab, King of Israel. II Chron. 18.
3. Antony. *Antony and Cleopatra*, IV. X. I.
4. A victory gained at too great cost. From the words of Pyrrhus, King of Epirus, after his victory over the Romans, 279 B. C. "One more such victory and we are undone."
5. The University of Leyden, in 1574.
6. The Battle of Dorking.*

7. "God bless the narrow sea which keeps her off."

- a. Tennyson — The Duke of Wellington. *Ode on the Death of the Duke of Wellington.*
- b. Scott—Nelson. *Introduction to Marmion.*
- c. Marvell — Cromwell. *Horatian ode. Golden Treasury, Book II.*
- d. Kipling — Lord Roberts. *Bobs.*
- e. Sir F. H. Doyle — The men of the *Birkenhead. Loss of the Birkenhead.*
- f. Tennyson — Napoleon. *Ode on the Death of the Duke of Wellington.*
- g. Macaulay — Prince Rupert. *The Battle of Naseby.*
- h. Campbell — The Crown Prince of Denmark. *The Battle of the Baltic.*

*1. The editor has always attributed these long-familiar verses to W. S. Gilbert, but they are not to be found among his poems. Can anyone supply the author's name? A copy of the poem appeared in the *St. John Telegraph* of September 24th.

"All their gunners, all their stokers,
Lay as flat as kitchen pokers,
All a-groaning from the bottom of their soul;
For all their precious crew,
Unaccustomed to the blue,
Invalided when the ship began to roll."

[Comments on answers received will appear in December.]

BIBLE READINGS FOR OPENING EXERCISES

1. Psalm VIII.
2. St. Luke XI, 1-10.
3. Galatians VI, 1-10
4. Deuteronomy XXX, 9-16.
5. St. Luke XII, 16-28.
6. Psalm XXXIV, 1-10.
7. II Chronicles I, 7-12.
8. St. Luke XVII, 11-19.
9. Proverbs XXV, 21-28.
10. II Chronicles VI, 34-39.
11. Psalm XXXIV, 11-22.
12. St. Luke XVIII, 9-14.
13. I Thessalonians V, 12-18.
14. Psalm LXXXIX, 5-15.
15. St. Luke XVIII, 35-43.
16. Ephesians IV, 25-32.
17. St. Mark I, 14-20.
18. Psalm XCI, 1-11.
19. I Samuel XVI, 1-13.
20. I Samuel XVI, 14-23.
21. St. Mark IV, 35-41.
22. Psalm XCVII.

CURRENT EVENTS.

Ungava, the immense territory which was added to the province of Quebec, in 1912, is a huge plateau, with innumerable lakes, constituting about one-fourth of its total area, and a network of streams which facilitate travel and are capable of supplying unlimited water power. The forests are of some value, and there are supposed to be valuable iron deposits. The lakes and rivers will yield an inexhaustible supply of fish.

The Canadian contingent arrived safely at Plymouth, England, on the fifteenth of October. From there they proceeded to Salisbury Plain, where they will remain until sent to the front. They were well received in England, and have made a favourable impression.

Colonel Hughes, the Canadian Minister of Militia, who followed the Canadian troops to England, has been promoted to the rank of major-general.

It is expected that a second Canadian contingent of sixteen thousand men will be ready to sail in December, and others will probably follow in the spring. There is every indication that the war will be of long duration and that the British will have to send larger armies to the front.

A new lock in the Sault Ste. Marie canal system just opened to navigation is one thousand two hundred and fifty feet in length, and is said to be the longest lock in the world.

The Canadian government has sold the ice-breaker Earl Grey to Russia and it is now at Archangel, where it will be used to keep the port open for winter traffic and the transportation of war supplies. It is renamed "Canada," in commemoration of the assistance thus rendered by the Canadian government.

The Mexican peace conference has made some progress by declaring itself a national assembly and making appointments of heads of departments for the government of the country. It has not yet chosen a provisional president, but has decreed that neither General Carranza, who is at present acting, nor General Villa, the leader of the northern rebels, shall hold that office.

The rebellion in Haiti has assumed such serious proportions that the United States may have to intervene.

The long battle line in France and Belgium has been extended to the coast, and a mighty struggle is taking place in the small part of Belgium which has not yet been overrun by the Germans. The capture of Antwerp, on the ninth of October, has been the most important event of the month in this part of the war zone. The strong fortifications were unable to withstand the heavy bombardment by the German guns; so the defenders abandoned the city, and succeeded in making their way along the coast to join the French and British forces. Meanwhile the Germans were strongly intrenched along their whole line in France, where they could remain on the defensive, and the fiercest of the fighting since, has been near the French and Belgian border. The German forces released from the siege of Antwerp followed the fleeing Belgians, expecting to push through to Dunkirk and Calais; but this movement seems to have been defeated, or at least delayed, by the battle in the valley of the Yser (eeser), a small river which enters the sea about ten miles west of Ostend. Both the British and the Belgian troops suffered heavily in this battle. At present, only the

extreme western part of Belgian, in which Ypres (eepr) is the chief town, is held by the Allies.

Antwerp, on the river Scheldt (shelt), sixty miles from the mouth, is a famous port which the Germans will be glad to hold permanently, if they can keep it. A large part of its trade in recent years has been German trade which found there a convenient port of shipment. The Germans, however, cannot now use it as a naval base, because the mouth of the river is in Holland.

On the Russian frontier, the Germans and Austrians advanced to a point within a few miles of Warsaw, and were then driven back, very much as they were in France in the preceding month. The approach of winter will probably stop active operations there before the end of this month, and before either side will have gained a decisive victory.

The Balkan Allies, after many successes, seem to be falling back before the Austrian advances. Albania, left without any government after the departure of Prince William of Wied, has fallen into anarchy. Italy has taken possession of the seaport of Avlona; Greece has moved or will move an army into the southern part of the country; Austria is arming the northern tribes against Serbia and Montenegro; Serbia is arming others against Austria; Turkey is trying to get possession of the whole.

The entrance of Turkey into the war is the most important event in the east. Without a declaration of war, Turkish ships attacked several Russian ports, and Turkish troops are said to be threatening Egypt. An Anglo-French fleet is now in the Mediterranean, of quite sufficient force to meet the fleet of the new enemy; and a British ship has taken and destroyed the Turkish fort on the Gulf of Akaba, near the Suez Canal.

Much anxiety was felt when it was learned that a rebellion had broken out in South Africa; but the rebel forces have been scattered, and it will probably not be of long duration.

SCHOOL AND COLLEGE.

The Canadian Branch of the League of the Empire have suggested that the school children of Toronto should prepare scrap-books with clippings from Toronto daily papers to be sent to the soldiers from that city now in training camps in England. The School Board are to furnish the books, and the League of the Empire will forward them.

Mr. A. Munro Grier, K. C., of Toronto, offers to subscribe 10c. to the Red Cross Society in the name of each child (up to a total of 1,000 attending school in Toronto,) who reads the White Paper, and informs him, through parent or teacher, of the fact, before October 31st. He hopes in this way to interest the children in the question of the justice of the war, and in the work of the Red Cross Society. Here is a suggestion for other public spirited persons interested in education.

The High School Alumnae Society of St. John has contributed \$200 to the Patriotic Fund. This sum is the Society's share of the profits from the production of the play, "All the Comforts of Home," lately given by the Alumnae.

A High School Association has been formed in Sackville, N.B. This Society proposes to arrange a series of lectures and debates to be given under its auspices, and also to

publish a High School paper called, "The Tantramar." Mr. Earle D. McPhee, Principal of the Sackville schools is President of the Association.

Mr. Pierson V. Curtis, member of the Mount Allison class of 1912, and Rhodes Scholar from Newfoundland, is enrolled in the Fourth Royal Border Regiment.

The Canadian Pacific Railway is offering to apprentices and others enrolled on the permanent staff of the company, and under twenty-one years of age, and to minor sons of employees, a free scholarship, covering four years tuition in applied science at McGill University. The scholarship is subject to competitive examination, which will be the regular matriculation examinations held in June 1915.

The New Wesleyan Theological College building in Montreal, has been officially opened.

The Dominion Militia Department has authorized McGill University to raise a regiment of graduates and undergraduates, or failing a complete regiment, to furnish part of a regiment to be made up from the various Canadian Universities.

The students of the Nova Scotia Normal College, with the staff, had an excursion to Londonderry on October 6th.

At a public meeting in New Glasgow, N. S., upon the re-opening of the Technical evening schools for the winter, Principal F. H. Sexton, of the Technical College, Halifax, reported that last year in all, 2,500 students attended Technical classes in the province. Short courses are to be conducted at the college this winter, similar to those at the Agricultural College, Truro. Mr. E. M. Macdonald, M. P., announced that he had been commissioned by a Colchester county man now in Vancouver to offer two bursaries in connection with the Technical classes, to be competed for by the sons of railway men in Colchester and Pictou counties. Mr. Macdonald on his own behalf offered two bursaries, one open to sons of men working in or about coal mines of Pictou county, and one open to sons of men employed in industrial work in New Glasgow or Trenton.

Amherst also has re-opened Technical classes for the winter.

Rural Science exhibitions throughout the country have continued well into October. An excellent one was held in Acadia Hall, Amherst, on Saturday, October 17th.

At the first meeting for the season of the St. John City Teachers' Association, officers were elected as follows:—President, Mr. Wm. Shea; Vice-President, Miss Bertie McLeod; Secretary-Treasurer, Miss Mason. Miss Clara Hay read a paper on a trip to England.

BOOKS RECEIVED.

The Lives of the Poets is admittedly the best of Johnson's works, and the *Life of Dryden* is one of the best, if not the best of them, largely because Johnson's limitations did not interfere with his appreciation of Dryden, as they did with his judgment of some greater poets. Mr. A. J. F. Collins, in his edition of the *Life of Dryden*, for school use, draws attention to the fact that the views, which Johnson expresses in this work, are the views of his time and hence that we have here not duly a revelation of the author, but also "of the general thought of the period on literary matters." That this

general thought differs so widely from that of our own day makes the "Lives" all the more valuable for careful study. [Johnson's *Life of Dryden*, with introduction and notes, paper, 135 pages, 2s. University Tutorial Press].

In *The Edgeworths, a Study of Later Eighteenth Century Education*, Miss Alice Patterson presents us with a very readable account of the educational theories and practice of Richard Lovell Edgeworth and his gifted daughter. She points out that in the eighteenth century, the Edgeworths identified themselves with those movements which best exemplify the modern spirit in education. In proof of this she reviews their writings— "Essays on Practical Education," "Professional Education," written by the father, and Miss Edgeworth's "Letters for Literary Ladies," "The Parent Assistant," "Early Lessons" and "Moral Tales." Miss Patterson decides that Mr. Edgeworth to some extent anticipates the conception of Herbert Spencer, that education should be a preparation for complete living. "The boy or girl having acquired a stock of intellectual interests and having learned habits of self-reliance and application, is to be turned out capable of undertaking any new study or any piece of practical work successfully, and ready to decide on any question of morals that may arise." The place given to manual work and elementary science is quite in agreement with the theories of today. Nor are the methods used what can be dismissed as old fashioned. *E. g.*, in elementary science, the method urged is the experimental, and as for the order in which subjects are presented, "the proper time to instruct the child, is when he begins to inquire." This has a modern ring, but have we yet reached the time when education stimulates curiosity? One warning given by Mr. Edgeworth is more needed, one would think, in our own day than in his. "If to entice the child to enter the paths of knowledge, we strew them with flowers, how will he feel when he must force his way through thorns and briars?" We wish we had more space to give to this interesting little book, and we commend it to the attention of our readers. [University Tutorial Press, 120 pages, 1s. 6d.]

Last September, we noticed Miss Agnes Nightingale's books on *Visual Geography* and recommended them to teachers of small children. We have just received a set of handbook models to accompany these little books. A background page to be coloured according to directions has outlined, suitable objects to be cut out, coloured and put in place. An Indian village, with a background of forest, has tents, canoe, tripod, deer and Indians in different positions and costumes. A river mouth has lighthouse, buoy, docks, steamers and boats of different kinds. The use of these models carries out the aim of the books, which is to stimulate the geographical imagination. [Adam and Charles Black, London, 6d.]

Clark's *Graded Writing Text-books* are really what the name implies, *i. e.*, not copy books to be written in, but books with full instructions how to use the copies that they give, which are to be taken out and used as models. The principles on which the instruction is based we believe to be sound, and the practice work is admirable. The copies proceed from a very large script to a smaller one and practice is given in figures, abbreviations, addresses and other applications of writing. Even where the books are not used in the school room, they would be very valuable to any inexperienced teacher of writing, who would study and apply the directions. Ginn & Company, Boston].



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N. B. OFFICIAL NOTICES

It has come to the notice of this department that certain book agents are improperly taking up the regular time of the schools and imposing books or apparatus upon teachers and trustees, alleging that the same has the approval of school officers of the Education Department.

No agents for books or apparatus have received the endorsement or approval of this department. No books so purchased will receive the library grants given under Section 96, School Manual.

W. S. CARTER,

Chief Superintendent of Education.

Education Office, Nov. 4, 1914.

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LITERARY NOTES.

The Living Age, of Boston, was never more indispensable or more up to date than now, through all its long career. It is the only magazine which gives to American readers, without abridgment, the most important and timely articles from a long list of English magazines, reviews and journals. The articles dealing with one phase or another of the present world-wide war are especially important, and the weekly issue of *The Living Age* enables it to reproduce these articles while they are still fresh.

The leading article in *The Living Age* for October 24, is a careful and authoritative review of "The Causes of the War," reprinted from *The Fortnightly Review*. Following this, in the same number, is a vivid account of scenes in Paris, "Before the Battles," written by Ernest Dimnet, and reprinted from *The Nineteenth Century*.

Ian Hay's Sketches of "The Lighter Side of School Life," which *The Living Age* is reprinting from *Blackwood's Magazine*, are full of life and humor, and give diverting pictures of typical masters and submasters and the boys in their charge.

The opening article in *The Living Age* for October 31, is a running summary of "The Diplomatic Correspondence" which led up to the present war, which shows exactly how

the negotiations were conducted and what were the attitudes of the different governments concerned. The information is drawn entirely from official sources and is presented with great force and clearness. The article is reprinted from the *English Review*.

An article called "The Blindfold Game," reprinted in *The Living Age* for October 31, from the *Pall Mall Magazine*, describes graphically the operations and efficiency of that modern engine of war, the submarine, which many naval experts look upon as likely to put dreadnoughts and super-dreadnoughts out of commission.

The Living Age for November 7 opens with an article on "The Courting of America," reprinted from *The Fortnightly Review*. This article, by James Davenport Whelpley, deprecates too great effort for conciliating American sentiment, partly on the ground that it is unnecessary, and partly on the ground that it is undignified.

In *The Living Age* for November 7, there is an article on "The Guiltless German People," written by F. G. Stone, and reprinted from *The Nineteenth Century*, which gives facts to show that the present war is not altogether the work of a military staff or an over-ambitious Kaiser, but that the German people are heart and soul in sympathy with it.

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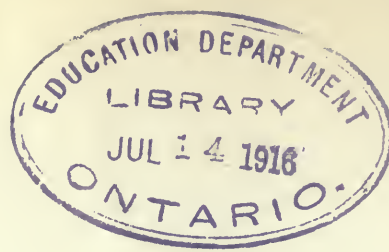
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THE EDUCATIONAL REVIEW,
St. John, N. B.

The attention of all our subscribers is directed to the very important notice addressed to them on page 151.

New Brunswick teachers are asked to read the official notices for December on pages 149 and 151.

Will those who are interested in the "Who, What and Where" questions, remember that answers must reach this office not later than the first of the month. Also, will new contest-

ants kindly sign with pseudonyms, which are less likely to be confused than initials.

The teachers who have asked for help with winter Nature Study lessons, will find it given abundantly by Professor Perry and Mr. DeWolfe in this issue.

Preach to all around you the "glorious right" of this war, in which we had to take our part or else for ever hang our heads in shame. . . . Cheer others on, and help them to bear hardships, privations and sorrow in the spirit of true patriotism. *Lord Robert's message to Eton Boys Clubs, 1914.*

There is but one duty for the British citizen at the present time—men and women, young and old, rich and poor, all alike must place everything at the service of the state. Nothing must be kept back—time, energy, money, talents, even life itself, must be freely offered in this supreme crisis.—*Lord Roberts, The Supreme Duty of the Empire.*

Christmas—and the war! Can we keep Christmas this year? Has the birthday of the Prince of Peace been kept for nineteen hundred years in vain? Ah, if there were no Christmas Day, if Christ had never come to dwell with men, whence would spring those acts of mercy and compassion, of generosity and self denial, of forgiveness and brotherly love, that shine out like stars against the blackness of the war? Whence would come that deep and increasing desire for peace, not merely because war interferes with comfort and prosperity, but because it is unworthy of men, who are the children of God?

It will be a blessed Christmas Day, if we begin to realize how much we need the rule of the Prince of Peace in our own hearts, and in the world, to overcome envy and hatred and malice and the love of power, and if we all pray more earnestly than ever before, "Thy Kingdom Come."

NATURE STUDY OF ANIMALS.

H. G. PERRY.

No teacher need suspend, even for the winter months, animal nature-study. A moment of reflection dissipates all fear of the stillness, dreariness, and cold of this vigorous season. The forbidding snows tell many stories of comedy and tragedy in the lives of the creatures around us that the summer fields forever wrap in mystic silence; and besides, for many forms, it may prove to be the most convenient time, and for others the most natural.

THE CANKER-WORM.

The canker-worm moth should naturally be studied at this time of year. Mention was made of this insect in an earlier issue of these articles, but as little was said of it at that time we venture to select it as our chief subject for this issue.

On mild days and evenings during November and December, one frequently finds ashy-grey silken-winged moths, flitting about in the vicinity of shade trees and orchards. A captured specimen shows that the wings are almost transparent, and one wonders why so frail a creature selects so bleak a season in which to appear. But delicate though it seems to be, it is nevertheless one of the hardiest of its race or order, and seems to require a considerable degree of cold for its perfect development. Compare its active season with the active period of other moths and butterflies.

Where has the canker-worm moth spent the summer? Where was the cocoon through all the warmth of summer and the beautiful days of early autumn?

Note that these moths are never seen till after the first severe frost of fall or early winter, a frost heavy enough to freeze the ground; then during the first warm spell they appear, and continue to arrive during every mild spell of winter and early spring, that is warm enough to soften the ground to the depth of an inch or so. One naturalist suggests that it shows its wisdom in putting off its arrival till after the summer birds have left. In many other ways also it is one of the most remarkable little insects that we could select at any time of year for nature-study work.

After a few further descriptive features, just enough for you to recognize it when you find it, we prefer to leave the whole subject in your hands, and you may go out and observe the color markings on its wings, the shape and position of the antennae, its power of flight, its food; the time of day it is most active, and many other interesting facts about it not recorded in books. Make drawings, write descriptions, and record facts from your own investigation.

The forms we find flying are all males; no one has ever yet found the female flying. She is entirely wingless, and has a body larger than that of the male. While the male is sporting on his beautiful wings, she is also taking active exercise in travelling up the tree, on her way to the upper branches. In this journey she is usually accompanied by one or more males flitting close around, and is then easily located; when alone she is correspondingly hard to find on account of her protective coloration, her body being about the same shade of color as the bark of the tree.

Collect several and cage securely in fruit jars, along with apple tree twigs stood upright. They are most abundant on the trunks of apple trees during mild evenings, and may be easily located with a lantern. Watch them closely and you will soon find masses of eggs on the twigs. Notice their arrangement. Are they in regular or irregular masses? How do they compare with those pictured in Fig. 2? Each female is said to lay over one hundred eggs, some say they average as many as one hundred and eighty-five.



Fig. 1. The Spring Canker-worm. a, egg mass; b, egg (magnified); c, larva; d, female moth; e, male moth.

Examine the eggs with a magnifying glass. They are flattened above, have a central puncture, and a brown circle near the border.

There are two species of canker-worms, the fall canker-worm, and the spring canker-worm. If the egg masses are like those described above



Fig. 2.

your specimen is the fall canker-worm; but if like those pictured in Fig. 1., you have the spring canker-worm.

As a rule the fall canker-worm appears and deposits its eggs in fall and early winter, though a few belated ones may be left over till spring; on the other hand the spring canker-worm appears and deposits its eggs in the spring, though at times a few in the scouting line may appear in the fall.

The adult forms of these two species are much alike to the casual observer, but on close examination it is found that in both sexes of the spring species there are two transverse rows of small reddish spines pointing backwards on each of the first seven abdominal segments; no such spines are found on the fall species.

The eggs of both species hatch into greenish larvae about the time the buds are bursting. They have appetites, and soon cut the tender leaves to such an extent that the crop is destroyed, and permanent injury is done the trees.



Fig. 3. The Canker-worm feeding, and "spinning down" from the tree.

In three weeks they are full grown, and are then about an inch long, and are the familiar loopers or measuring worms found on apple-trees in the spring. (See Fig. 3). The larvae of these two species are easily distinguished. Note in Fig. 1., the larva of the spring species shows but two pairs of prolegs, the legs by which it is attached to the twig, but the larva of the fall species always has three pairs of prolegs. Watch for these larvae next spring, and note that they also enjoy protective coloration. Their presence is readily detected by jarring the tree. Strike a limb with a walking stick and note how they drop from the branch, and suspend themselves by a silk thread. This is the "spinning down" that is shown in Fig. 3.

In early summer they descend to the ground,

burrow in the earth, form their cocoons and so pass into their long period of rest.

Canker-worms belong to the great order of insects called Lepidoptera. Look up the derivation of this word, and afterwards examine a small portion of the wing of a butterfly or moth under a compound microscope and you will be at once impressed with the appropriateness of the name. The Lepidoptera have four large wings, covered scales, sucking mouth parts, and undergo a complete metamorphosis. The larvae are called caterpillars; they feed mostly on plants, and after becoming full grown and fat, they pass into a resting condition called the pupal stage, from which emerge the imagos, the winged forms which lay the eggs, and thus the life cycle is complete.

As an order, the Lepidoptera is at once the most interesting, and best known of all our insects. This is the order of the busy silk-worm, the dreaded brown-tail and gipsy moths, and of the all-too-familiar tent caterpillars and army-worms; here also belong the scores of bright and beautiful forms that either visit our street lamps at night or make glad our fields in the summer sun.

THE CONTROL OF CANKER-WORMS.

The two species are so much alike in habits that we can apply similar methods in combating them. The best of all methods are those of a preventive nature, and should be begun in the fall. A band of tangle-foot around the trunk of the tree forms a zone in which the females perish. The writer has a record of 125 captured on one tree in one season in this way. If each female lays on an average 125 eggs, it is easy to compute the number of the army of green measuring worms we might have expected in the spring. How then can any tree escape that is not guarded by tangle-foot? Only by the constant care of silent workers, our winter birds. "Nearly all of the common birds feed freely upon the canker-worm, and benefit the orchard by so doing. The chickadee is perhaps the most useful,"—*Agriculture for Beginners*. Another writer says that an orchard can be practically rid of canker-worms by protecting chickadees and attracting them with food. Chickadees are not only fond of the eggs but are said to devour on an average, when they are available, thirty female canker-worm moths a day. These little

bird friends need protection against cats, shrikes, and even thoughtless boys. They are fond of suet, which can be fastened to the trees, and always proves a good drawing card. When suet is plentiful, note how they pick off tiny pieces and hide in crevices in the bark. Watch them at their work gathering the egg masses from the twigs, and eating the food you provide.

OTHER TOPICS.

The Christmas season suggests many other subjects for nature-study. This is an opportune time to give some lessons on our farm animals, especially turkeys, ducks, geese and hens. Name their different parts, note the different kinds of feathers, study their skeletal structures, and point out homologous parts when they are compared with the dog, horse, man and other animals.

[The cuts used in this article are copied from "Agriculture for Beginners," by Burkett, Steeves & Hill, by kind permission of the publishers, Messrs. Ginn & Co., Boston.]

BIBLE READINGS FOR OPENING EXERCISES.

1. St. Matthew XXI, 1-11.
2. Romans XIII, 8-12.
3. Isaiah XXXV, 4-10.
4. St. Matthew XI, 1-5.
5. Revelations XV, 2-8.
6. St. Luke II, 1-15.
7. Isaiah IX, 2-7.
8. St. Matthew II, 1-11.
9. St. Luke II, 15-21.
10. Psalm LXXXV.
11. Acts VII, 55-60.
12. St. John XXI, 19-25.
13. St. Matthew II, 13-23.
14. Psalm LXXXIX, 1-9.
15. St. Luke II, 41-52.
16. Romans XII, 16-20.
17. Psalm CXIII, 1-6.
18. St. Matthew VIII, 5-13.
19. I Samuel III, 1-10.
20. Isaiah LXI, 18-22.

Then let every heart keep its Christmas within,
 Christ's pity for sorrow, Christ's hatred for sin,
 Christ's care for the weakest, Christ's courage for right
 Christ's dread of the darkness, Christ's love of the light,
 Everywhere, everywhere, Christmas tonight.

—Phillips Brooks.

CENTENNIAL ANNIVERSARIES OF THE
WAR OF 1812.

J. VROOM.

XXVIII. — The Treaty of Ghent.

December 24.—Month by month we have followed the tales of

“Old, unhappy, far-off things.
And battles long ago.”

Now December brings us the anniversary of the peace.

The Treaty of Ghent, which brought the war to an end, was signed on Christmas Eve, 1814. True, the battle of New Orleans, the last great battle of the war, and the most disastrous for British arms, was fought after the treaty was signed; and hostilities continued along the Atlantic and Gulf coasts until news of President Madison having signed the ratification of the treaty brought them to a close. True, also, the subsequent years of peace have not been wholly free from alarms. There have been ominous clouds at times on our southern horizon—the Aroostook war; the Oregon boundary dispute, with its election cry of “Fifty-four forty or fight;” the Trent affair, which compelled us to make hurried preparations for defence; the rumours of secret plans for invasion suddenly stopped by the death of President Lincoln; not to mention those of lesser portent. But again and again the threatening clouds dispersed; and all the more may we rejoice now that we escaped so often, and be ready to join with sincere good will in recognizing the completion of a hundred years of peace. The great international celebrations which had been planned for that occasion will not take place, because of the terrible war with Germany and her allies, in which we are now engaged; but we have the general sympathy of the people of the United States with us in the present struggle, and that is more acceptable than costly demonstrations of friendship, and a more convincing proof that the old animosities have passed away.

When the first news of the peace was brought across the Atlantic, it was joyfully welcomed by the seaport towns in the northern part of the United States, without waiting for the President's approval. The following, taken from a New York paper, gives a tradition probably founded on fact:

Years ago, the office of the old New York Gazette was in Hanover Square, near the corner of Pearl Street. It was a place of resort for news and conversation, especially in the evening.

The evening of February 15, 1815, was cold; and at a late hour only Alderman Cebra and another gentleman were left with Father Lang, the venerable genius of the place. The office was about to be closed, when a pilot rushed in, and stood for a moment so entirely exhausted as to be unable to speak.

“He has great news,” exclaimed Mr. Lang.

Presently the pilot, gasping for breath, whispered intelligibly, “Peace, peace!”

The gentlemen lost their breath as fast as the pilot gained his. Directly the pilot was able to say: “An English sloop-of-war is below with news of a treaty of peace.” They say that Mr. Lang exclaimed in greater words than he ever used before or after. All hands rushed into Hanover Square, crying, “Peace, peace, peace!”

The windows flew up, for families lived there then. No sooner were the inmates sure of the sweet sound of peace, than the windows began to glow with brilliant illuminations. The cry of “Peace, peace, peace!” spread through the city at the top of all voices. No one stopped to inquire about “free trade and sailors’ rights.” No one inquired whether even the national honour had been preserved. The matters by which politicians had irritated the nation into war had lost all their importance. It was enough that the ruinous war was over. An old man on Broadway, attracted by the noise to his door, was seen to pull down immediately a placard, “To let,” which had long been posted up. Never was there such joy in the city.

A few evenings after, there was a general illumination; and, although the snow was a foot deep, and soaked with rain, yet the streets were crowded with men and women eager to see and partake of everything which had in it the sight or taste of peace.

The first article of the Treaty of Ghent stipulated that territory taken by either party from the other should be restored. While this sounds fair, it was rather a one-sided provision. It meant that Britain should give up Eastern Maine, Fort Niagara, Michilimackinac, Fort Boyer and Isle Dauphin at Mobile, and Cumberland Island off the coast of Georgia. The United States, having already abandoned Fort Erie, had nothing to restore excepting Amherstburg and the adjoining territory in the south-western part of Upper Canada.

But the British commissioners were willing, for the sake of peace, to agree to this restitution of territory, and let the boundary line remain as before. They only insisted that the United States should include the Indians in the peace. The other provisions of the Treaty were of comparatively little moment.

So the cruel, needless, fruitless war was ended.

The British and Canadians had lost nothing beyond the cost of carrying on the war. This terrific cost, in men and money, had fallen heavily upon both parties. The United States had lost certain trade privileges in British India, and certain fishing privileges in British American waters. What were the gains?

Britain had gained nothing of material advantage, either to herself or to her colonies. The United States had gained nothing. The disputed maritime rights which had been the ostensible cause of the war were not mentioned in the treaty of peace. Canada, regarded by anticipation, as the helpless victim of the war, was the one to profit by it in the end. Terrible as that war had been to her, a nation had been forged and shaped beneath its blows. English and French were thus welded together as they could have been in no other way; their union making possible the Confederation of the Provinces and the Greater Canada of to-day. Therefore it has well been called the national war of Canada.

Even so may the great imperial war in which we are now involved be the means of uniting the Empire; and, though the end may be yet far off, we may well hope that it will be followed by more than a hundred years of peace.

THE DATES UPON WHICH GIFTS ARE GIVEN.

In Holland, on St. Nicholas's birthday, three weeks before Christmas.

In Belgium, also on St. Nicholas eve.

In Switzerland the shoes are set outside the door on the two Saturdays preceding Christmas. These are filled with candies and nuts, but the chief gifts are found on a Christmas tree on Christmas morning.

In Denmark and Germany, Norway and Sweden, the tree is a fixed institution, being lighted on Christmas eve and often kept until Epiphany.

In Spain and Italy, gifts are given on Epiphany, twelve days after Christmas, to commemorate the gifts presented on that day by the Wise Men to the infant Jesus. This is also true of Russia.—*Selected.*

HIGH SCHOOL LITERATURE.

SUGGESTIONS FOR TEACHING SHAKESPEAR'S "JULIUS CÆSAR."

Some knowledge of historical fact is necessary. The essential points are:—1. The tyranny of their early kings had made the Romans hate the very name of king. 2. Rome had risen to greatness under a republican form of government which lasted for nearly 500 years. 3. During the last century of this period, the ruling power passed more and more into the hands of one or the other great soldier. 4. There were still patriotic men at Rome, who tried to uphold the republic, and resist a one-man rule.

The steps immediately leading to the situation at the opening of the play are:—

59, B. C.—Formation of the first triumvirate, Cæsar, Pompey and Crassus. These three men secure for themselves the control of the state.

54, B. C.—Crassus is killed in war against the Parthians.

49-48, B. C.—Civil war between Cæsar and Pompey, ending in Pompey's defeat and death, and leaving Cæsar master of the Roman world.

The references in the play to Greek and Roman history, must be mastered. But do not divert attention from the play itself to studies of the state of Rome or the comparative merits of different forms of government.

Read the play through rapidly to get the action. Stop at the end of each scene to be sure that its main significance has been noted. *e. g.*; Act 1., Sc. 1., shows the fickleness of the mob, and the fact that there are two parties in Rome. Cæsar is popular, but has enemies. Which party will prevail? In this first reading, be satisfied if the incidents, and *the order in which they occur* are clearly grasped. The class should see how the question at issue is shown in I. 1., then follow scenes showing Cæsar's position, the reasons of the conspirators, progress of the conspiracy, failure of attempts to baffle it, its success, the suspense after Cæsar's death, then the turning point in the effect of the two orations; after that, the steady rise of the party of Antony and Octavius, and the corresponding fall in the fortunes of the conspirators, culminating, as Shakespeare's tragedies always culminate, in the death of the hero.

This rapid reading should not have more than two periods given to it.

For careful study, assign parts, and expect each reader to prepare his or her part, knowing the pronunciation and meaning of all words, so that it may be fluently and intelligently read. If the class is large, divide it into groups according to ability, information and tastes. To each group give one question or topic to be got up for discussion, varying your questions in subject matter and in difficulty for the different groups. Some pupils will have access to other books, and may be given questions involving comparisons. Others will be limited to the text-book and should have questions that can be answered from the play itself. To get variety and prevent one-sided study, set questions on, (a) The plot; (b) Character; (c) Style; (d) Versification; (e) references and allusions. A certain number of lines should be memorized for every lesson, and these should be set, or a small number of passages suggested for pupils to choose from. Have these lines written out from memory and collected in the first five minutes; then take about half the time for discussion of the questions, the rest for reading.

TYPICAL QUESTIONS AND POINTS FOR DISCUSSION.

1. The action. What events are made known in narration, not in action? Suggest any reason for this. Discuss Portia's position in the play. What would be lost if she were left out? What is the significance of II, 3? Of III, 3? Do these scenes advance the action or throw light on character? Name, in order, the different indications in Act IV. of the falling fortunes of Brutus and Cassius. Note that, besides the outward conflict between two parties, there is a conflict in the hero's mind. See I. II. 6, and collect other indications of this. Where is the crisis, or turning point of the play? How does it end — in excitement or in quiet?

2. Character. What speeches and actions show the influence that Brutus had among the conspirators? Can you account for this influence? Was it felt when he was not present? "Cassius, Cinna, Clitus and Antony all apply the same adjective to him. What is it? Did Brutus understand Cassius? Antony? The mob? Did the mob understand his speech? Prove your answers. When Brutus and Cassius differed about the policy of an action, which was right? Contrast the motives of Brutus and Cassius in killing Cæsar. Why does Cassius so often give in to Brutus? Compare closely the speeches of Brutus and Antony in Act III. Discuss (a) the truth and (b) the effect, of Antony's words beginning, "I am no orator," and ending "stir men's blood." Can you show from the play that Antony was unscrupulous, cruel, self-

indulgent, self-reliant, brave, resourceful, keen in understanding men, devoted to Cæsar?

3. Style and versification. Bring to class a passage that seems to you particularly striking or beautiful. What characters speak prose, and when? What is the regular number of syllables in a line? Collect lines with extra syllables; short lines. Do you find that the use of a short line corresponds with anything in the sense? Compare the uses of the following words with our modern use:—Discomfort, his, climate, color, emulation, fond, knave, merely, nice, prevent. Give examples of puns.

4. Miscellaneous. "I cannot, by the progress of the stars, give guess how near to-day." What other speeches tell us whether it is day or night? Why were such speeches necessary on Shakespear's stage? What does Brutus think about suicide? Compare what is said on the subject by Macbeth, Hamlet, Imogen. What is the happiest speech that Brutus makes? With the conversation between Brutus and Portia compare I. Henry IV. II. 3. With Brutus' speech, IV. III. "Why farewell Portia." Compare Macbeth V. 5. "She should have died," etc. Collect references to Julius Cæsar from other plays of Shakespeare.

[The REVIEW for January, 1911, has other notes and questions on this play, and can be had from this office. Price ten cents.]

QUESTIONS ON DICKENS.

1. Dickens was born in whose reign? In the year that what war began? What greater war was going on? Name two great English poets and one great novelist who were writing at this time. What poet was born in the same year? What great novelist born the year before? What famous event took place when Dickens was three years old? What do you know of the conditions of your own town or the surrounding country, at the time of Dickens' birth? At the time he was writing his greatest books? At the time of his death? Dickens was born in war time. Did any great wars take place when he was a man? Do any of his books deal with war? What aspect of the present war would, in your opinion, have impressed him most? What two novels of his may be called historical novels? Did he write anything but novels? What help could a historian of English life, writing a hundred years from now, get from Dickens?

2. Where was Dickens born? What do you know of his birth-place? Of the town in which he lived when a little boy? Is either of these places mentioned in his writings? Where did he spend nearly all his life? What is the chief scene of his stories? What schooling had he? What books did he read when a child? How many of these have you read? What different occupations did he follow? What opportunities did he have in early life to become familiar with, (a) Legal terms and the ways of lawyers; (b) Country towns and local politics; (c) Post-chaise and stage coach journeys and inns. How long ago was his first book published? To what quality are we told his success in early life was due? How did most of his books come out? Do you know anyone who read them as they came out? With what different magazines was Dickens

connected? What particular desire of his boyhood was fulfilled in 1856?

3. In what novels do the following people appear:—Sairey Gamp, the Micawbers, Mrs. Wilfer, Betsey Trotwood, Grip the Raven, Dolly Varden, Mrs. Gummidge, Sam Weller, the Fat Boy, Little Nell, Silas Wegg, Mr. F.'s Aunt, Uriah Heep, Mrs. Jellyby, Mr. Bumble, Mr. Squeers, Mark Tapley, Susan Nipper, Sydney Carton, "The boofer lady?" Tell the class something about one of the following schools:—Dotheboys' Hall, Mr. Creakle's, Dr. Blimber's, Dr. Strong's, Miss Tomkins' Academy; about one of these boys or girls:—Pip, Traddles, Jo (in Bleak House), Rosa Bud, Caddy Jellyby, Charley Hexam, Charles Bates, Kit Nubbles, the Marchioness, Harry Walmers, Jr. Dickens preferred "David Copperfield" before all his other books. Do readers agree with him? What is your favourite among his books? Select from one of his books, and bring to class, a description of an out-door scene; of an indoor scene; of a person; of things to eat; a conversation. Name what you consider the funniest passage in his books; the most amusing person.

4. When did Dickens write "A Christmas Carol"? What did he declare to be his purpose in writing it? What other book was he writing at the time? Name his other Christmas books. In a "A Christmas Carol" he dwells upon unpleasant cheerless weather. Why does he do so? Mr. Chesterton says that "cosiness" is comfort depending upon surroundings of discomfort. Where in Dickens do we get this kind of cosiness? About how old is Scrooge? How long had Marley been dead? What was "nuts" to Scrooge? What did Marley's Ghost say was "required of every man?" What does the prophet Micah say on the subject? With what Scrooge says in the three interviews in his office, compare the closing words of "The Chimes."—"May not the meanest of our brethren or sisterhood be debarred their rightful share in what our great Creator formed them to enjoy." Note the changing attitude of Scrooge towards the different Spirits. Tell in detail what brought about that change. If you have read "Silas Marner" compare the change in the miser. What part does music play in the story? What does Dickens say about laughter?

5. Who:—(a) Was blest in a laugh? (b) Were *portly* gentlemen, *pleasant* to behold. (Name other portly gentlemen in Dickens' books. Does he agree with Julius Cæsar?) (c) Nipped the evil spirit by the nose? (d) Lived in Camden Town? (e) Wore a Welsh wig? (f) Was one vast substantial smile? (g) Was brave in ribbons?

6. Select from "A Christmas Carol" or "The Chimes" two descriptive passages from which a picture might be painted. Let one be a beautiful or cheerful scene, and the other contrast with it. Quote a passage that appeals especially to the ear. Do you find many such? Compare the descriptions of Dot Peerybingle and Scrooges' niece. Give examples of Dickens' use of personification.

Chill December brings the sleet,
Blazing fire and Christmas treat.

—Old Rhyme.

NATURE TOPICS FOR WINTER MONTHS.

L. A. DEWOLFE.

Within five weeks, thirteen teachers have asked the indefinite question, "What nature work can I teach during the winter?" As all were Nova Scotia teachers, I could have quite consistently referred them to the public school course of study. There topics are suggested for each season. Some of these topics are given under the nature study prescriptions for the various grades, and others under the geography prescriptions.

Possibly, however, these teachers do not want the bare topics; but, rather, an amplified lesson. If so, one cannot in the limited space available in the REVIEW, outline a lesson on every topic.

During fine weather throughout the winter, the children can collect material almost as well as in the summer. Teachers sometimes confine nature study to the collecting and naming of flowers. But that is a very small part of the subject. Mosses, lichens and club-mosses are more attractive in winter than in summer. We have five or six evergreen ferns. To get acquainted with them now is a good start towards a further acquaintance next spring.

Then, again, winter is the best time to study trees. In summer, the leaves help to identify a tree at close range; but the mode of branching is, at that time, largely hidden. Why not have your children draw trees now; and in June draw them again? Copy the trees; not *pictures* of them.

No teacher can teach everything about a tree in one lesson. A good field lesson would be to have the children identify trees by their shape. Notice the size of the branches in comparison with the trunk; the angle at which the branch meets the trunk; whether the trunk continues as such to the top of the tree; whether the branches are stiff or drooping, etc. Then, for the next week, have tree-naming and tree-drawing contests. Search for or originate tree games.

In some future lesson, identify trees at close range by their bark or twigs or buds.

In still other lessons, study in detail the bud coverings and contents. Study also the lenticels; the annual growth in the length of twigs; the wood in cross-sections and length-wise sections, the thickness, texture, taste, etc., of bark; and

then find out all you can about the economic uses of the tree in question.

I fancy some teachers exclaiming, "I can't teach this because I don't know it myself!" Then study with the pupils. Let them give you an oral examination occasionally.

How many kinds of lichens and mosses can you find growing on trees? Are any of these useful to us?

Besides tree-study, one can teach useful lessons on snow, frost and ice. In advanced classes, the *artificial* production of ice is a good lesson. The effects of ancient glaciers are in evidence all over the Maritime Provinces. Read something on that subject.

In winter, schools can add to their museum collections through exchange with other schools. Industrial collections, such as the one outlined last month, are possible everywhere.

Search apple trees now, for the egg-masses of the codling moth, cocoons of the tussock moth, or, even, nests of the brown-tail moth caterpillars. Children will be interested to find the various wintering habits of insects. When they find the eggs of one moth, the pupa of another, and the larva of another, they will wonder if any insects spend the winter in the adult form. The house-fly will give the most familiar answer to that question; though it is possible to find the mourning cloak and one or two other butterflies clinging to the inside of barns and sheds during winter. Frequently one finds them in attics of our houses.

On the seashore, there are often opportunities to collect seaweeds and seashells; or to study the barnacles and other small animals so common there. Even the ice-cakes and the boulders on the beach have their lessons. An interest in these outdoor objects and forces will do much to drive away homesickness — so common to young teachers who have uncongenial associates.

Why not spend a month this winter learning all you can about the common articles in the kitchen or pantry? What about our fruits and spices? How much do you know about cloves, nutmegs, cinnamon, ginger? Even the broom with which one sweeps the floor, represents at least a half-dozen industries. Where did the plant grow that furnished the "broom?" When one hears the word "sorghum" one is more likely to think of something to eat than to

think of sweeping the kitchen. The twine and the wire used in making a broom furnish two good lessons.

Teach lessons about the clothes we wear. Wool, cotton, linen, leather, rubber and jewelry, will keep any school busy for a month. The tools we use in our daily work, our dishes, our furniture, in fact, everything we see or use has behind it a nature lesson. It will require work on the teacher's part to prepare the lesson; and it will take much of the pupils' time to search for information relative to it. I take it that a nature lesson includes first-hand knowledge of the object or phenomenon — investigation, examination, reflection — followed by a search for what others have found out about it or have done with it.

The question, then, is not "What nature work can we do?" but "What can we afford to neglect?"

ANSWERS TO QUESTIONS.

I can answer the questions that have been asked relative to apples by grouping all into one paragraph. I need not repeat the questions. They can be found in the October REVIEW.

Apple-trees will bear at least for one-hundred years. It would not be profitable, however, to keep them in bearing so long if younger trees would do better. The fruit-buds are at the ends of the twigs — usually the short, stout, wrinkled side twigs called spurs — and are larger and more spherical than the leaf buds. A leaf-bud is somewhat pointed, A fruit-bud is blunt.

Sunlight influences the color of an apple. Those getting best light will be most highly colored. The size of an apple is influenced by the seed. If the seed is not fertilized, and, therefore, does not develop, the apple will not develop so well. The apple scab is a fungus disease and spreads by spores. Proper spraying prevents the spores from germinating.

A teacher asks if oak acorns mature in one year, or if they require two years. Before answering, I'll pass the question along to REVIEW readers for a month.

Another teacher wants to know how dangerously poison a lizard is. She says she found one in a well. Do you believe her?

In the November number of the REVIEW,

Principal Jonah, of Woodstock, had a good suggestion about a nature study club. Does anyone else want it? A lady, this week, told me how a toad shed his skin. Does anyone else know? She gave only the report of her own observation.

FOREIGN NAMES.

J. VROOM.

The war news brings us many unfamiliar names of places. Sometimes they are spelled correctly as we see them in print, and sometimes they are misprinted. Frequently this makes little difference, as we do not know the places, and so the names have but little meaning for us in their correct form. We may look at such a name in the newspaper without attempting to pronounce it, quite content if we can find it on the map; for it will then have served its purpose as a place name by pointing out to us the place mentioned. But we must pronounce some of them at times, and we would like to get them right. This brings up the whole question of the correct pronunciation of foreign geographical names.

Where there is an accepted English name for a place, differing in spelling and pronunciation from the true local name, we must, of course, use the English form; as Antwerp, not Anvers; Vienna, not Wien. Where the foreign spelling is preserved, but there is a well established English pronunciation, we should follow the English usage. Thus Rheims should be pronounced Reems, instead of trying to imitate the French pronunciation, which would sound something like an attempt to say Rems without closing the lips. Where there is no English form in general use, we may have to make our best effort to give the native pronunciation, as nearly as we can learn it; and must expect that to be far from correct unless we speak the language of the place.

Take for instance the name of that fortress in Austrian Poland which has been more or less threatened by the Russian advance for the last two months, and which we have come to know by sight as Przemysl. The p, we are told, should be pronounced even more strongly and clearly than it usually is in English; the rz sounds like sh, or perhaps it is more correct to say that the r is silent and the z sounds like sh; the e is the Polish modified e, which should be marked with a small vertical line above the letter, and which is described as like a prolonged sound of the English short e modified by the back part of the tongue being raised toward the hard palate; (and, by the way, if the vowel were not so modified the r would be sounded, in the Polish fashion, a sound produced in the back of the mouth by the vibration of the soft palate;) the m is sounded as in English; the y like our short i; the s like sh; and the l has a value not far from the English w or y. Perhaps pshem-ish with the accent on the first syllable, is near enough to the true pronunciation. If we add the sound of the letter l as we usually pronounce it, it will be incorrect. We might need a short course in vocal gymnastics to enable us to pronounce the name so that a resident of the place would recognize it.

The new Standard Dictionary says that the awe-inspiring phrase "correct pronunciation" has no other meaning than the pronunciation usual with educated speakers. If a word is not pronounced or is pronounced very rarely by speakers of English, there is no usage, no convention, hence no standard of correctness. Let it not be supposed that the native or local pronunciation affords an ideal standard. The ideal is really the phonetic form which the word is destined to take should it become completely Anglicized. It is impossible to learn exactly how the words of a foreign language are pronounced, except by studying the language long and carefully. This being so, there is little use of meticulous exactness in giving the native or local pronunciation of foreign words that have no real currency in English.

When we look up a word in our gazetteer, therefore, we may take the pronunciation given there as approximately correct; but we must remember that it does not pretend to be quite so, and that in many cases, if the right sounds could be expressed in type, our untrained vocal organs could not reproduce them. Let us try to be as near the right as possible; and, above all, where there is no accepted English pronunciation of a word, let us not try to invent one for ourselves.

HOW TO KEEP THE PICTURE SUPPLEMENTS.

Doubtless many teachers passe-partout the picture supplements which come with the EDUCATIONAL REVIEW, to adorn the walls of their school-rooms. I have lately learned a new way of finishing these pictures. It is new to me, and although I know that many teachers have done them in this way, as I have never seen directions in the REVIEW, I will share my knowledge.

First, choose a suitable picture, not too large, that would fit on an oval plaque (I find heads look best done this way) and trim the outline neatly with scissors. Next, get a platter, one having the centre oval, about seven or eight inches long is a good size; wet your picture and platter and lay the former face down on the platter. Now mix some plaster of Paris with cold water, making the consistency of thin batter, and pour on the platter, covering picture. This should be from one-quarter to one-half inch in depth. Immediately on pouring mixture on platter, have a piece of cord or picture wire ready and press it down into plaster to make a loop to hang plaque by. Be sure to remember which part of plaque will be the top as you have no way of knowing when the mixture has been poured on.

Allow this to remain undisturbed for at least

twenty-four hours, then insert the point of a knife-blade around edges and remove from plate. The picture will adhere to the plaster of Paris.

If you have a little skill with the brush, make a plaque without any picture on it and sketch a little scene, flower, etc. These look very nice.

Also, if one wishes to tint the plaque, it is very easy to do so by adding a little of the desired color to the water with which plaster is mixed.

This work must be done rapidly as the mixture "sets" quickly.

A. I. R.

SOME BOOKS ON THE WAR.

From a bewildering list of books on the war, we have selected the names of the following small and inexpensive volumes, all published under names that are a guarantee for their trustworthiness, and all, we believe, likely to be especially useful to teachers.

OUR JUST CAUSE. Prepared under the auspices of the Royal Colonial Institute. (Heinemann, 1s. net). "Appropriately described as 'Ammunition for Citizens'—A perfect storehouse of facts."

THE OXFORD WAR PAMPHLETS. (Oxford University Press).

1. The War and the British Dominions. (2d. net). "should be in the hands of all teachers."

2. The Deeper Causes of the War. (3d. net).

3. Just for a Scrap of Paper. (1d. net).

The above are all strongly recommended by "The Federal Magazine," the organ of the League of the Empire.

The MacMillan Co., of Canada, offer to send the following five books post paid on receipt of 50 cents.

WHY THE EMPIRE IS AT WAR. The causes and the issues. Set out, in brief form, from the diplomatic correspondence and speeches of Ministers. By Sir Edward Cook. Post paid, 5 cents.

THE MEANING OF THE WAR. For labour, freedom and country. By Frederic Harrison. Post paid, 5 cents.

MODERN GERMANY AND THE MODERN WORLD. By Professor M. E. Sadler, C. B. Post paid, 10 cents.

THE COUNTRY'S CALL. A short selection of patriotic verse. Chosen and edited by E. B. and Marie Sargent. Post paid, 10 cents. A collection of famous and stirring poems of this description by writers from Shakespeare to the present day.

THE CASE OF BELGIUM IN THE PRESENT WAR. An account of the violation of the neutrality of Belgium and of the laws of war on Belgian territory. Published for the Belgian delegates to the United States. Paper. Post paid, 25 cents.

GERMANY AND ENGLAND. J. A. Cramb. The English edition, which is the one all Canadians should read, has a preface by Dr. A. C. Bradley, and is published by John Murray. (2s. 6d.).

A SCRAP OF PAPER. E. J. Dillon. (Daily Telegraph War books). Hodder and Stoughton. 35 cents.

Interesting magazines articles are countless, but every one should read Lord Roberts' last message, "The Supreme Duty of the Citizen in the Present Crisis," written for the "Hibbert Journal," and reprinted in "The Living Age" for November.

TEACHERS' INSTITUTE.

At the thirty-first annual convention of the teachers of Kings and Queens Counties, N. B., at Sussex, October 29 and 30, excellent work was done both in the sectional and general meetings. In the trustees and ratepayers section, the following important resolution was passed:—Resolved, that the Board of Education be requested to add to the school regulations that, in the order of business of the annual school meeting, one or more delegates be appointed in every school district to attend the County Teachers' Institute, and that the respective districts be authorized to pay the expenses.

At the public meeting on Thursday evening, the Chief Superintendent of Education urged the importance of this step, pointing out how greatly improvement in the school would be hastened if expressions of opinion could be got from trustees and parents, as well as from teachers and school officers. Dr. Carter explained that the reason the Western provinces can outbid the East in the matter of teachers' salaries, is because they have very valuable school lands, for which the Maritime provinces have no equivalent, and that representations on behalf of the East are now being made at Ottawa. He also touched upon, among other subjects, the waste of time and service caused by the constant changing about of teachers, and the duty of teachers to read for information.

The President, Mr. N. S. Fraser, in his introductory speech, spoke of the improvement in the schools by the introduction of school gardening, physical drill, household science and manual training. He strongly advocated consolidated schools as a means of attracting trained teachers and keeping them in the profession. Inspector Brooks pleaded for military training for our boys, and spoke very impressively of the solemn obligation resting upon us all to do everything in our power for education. In a brisk and practical discussion rising out of Miss Burgess's excellent paper on household economics, a suggestion was made that the girls in country

schools should be encouraged to knit for our soldiers, or for the Red Cross Society, the object being one sure to enlist their interest.

Much of the time of the convention was devoted to lessons given in the different sections. Many of these were admirably taught, and drew out useful discussions. Papers were read on English literature, school gardening, and the dull pupil. A lesson in physical drill was given by Mr. R. K. Nevers to a class of boys. Directors Steeves and Peacock addressed the Institute on their respective subjects. At the public meeting, the address of welcome was delivered by Mayor W. B. McKay, and the high school orchestra furnished music.

The attendance of 131 was the largest this Institute has ever had. The officers for next year were elected as follows:—President, C. T. Wetmore, Principal Hampton Consolidated School; Vice-President, A. B. Brooks, Apohaqui; Secretary-Treasurer, W. N. Biggar, Sussex; additional members of executive, Miss Hattie McMurray, Rothesay; E. J. Chambers, Havlock. At the closing meeting the sum of twenty dollars was donated to the Belgian Relief Fund.

NEW BRUNSWICK HIGH SCHOOL TEACHERS' ASSOCIATION.

Last week considerable space in the EDUCATIONAL REVIEW was used by the High School Association, in an attempt to bring the aims of this organization before the teachers of New Brunswick. We recognize that all teachers are busy at this time of year, but if this Association is to do the work for which it was intended, it must receive assistance from all parts of our province.

Following, will be found some articles of the constitution of the High School Teachers' Association. Read them over carefully. If you consider the aims worthy of support, if you believe in the importance of united effort, send your name and membership fee to the secretary-treasurer or to one of the following:—W. H. Elgee, Moore's Mills, Charlotte Co., N. B.; J. C. Hanson, Riverside, Albert Co., N. B.; J. H. Barnett, Hartland, Carleton Co., N. B.; L. R. Hetherington, Newcastle, Northumberland Co., N. B.

Articles from Constitution.

1. MEMBERSHIP: All teachers holding Superior or Grammar School licenses are eligible for membership.

2. AIM: The purpose of this Association is to promote the best interests of the teachers of N. B. The following platform has been adopted as primary aims of the Association:

(a) Equal salaries from School Boards for male and female teachers.

(b) A higher standard for Superior License.

(c) An annual increase of salary to a teacher, who remains in a district, until a minimum of one thousand dollars per annum has been reached — this sum to include provincial and local grants.

3. FEE: The membership fee shall be \$1.00 per year, to be paid not later than October 1.

4. It shall be the duty of the Executive:

(a) To obtain a list of all Superior and Grammar Schools in the province, together with salary paid last teacher. Such list to be available at any time by any member of the Association.

(b) To make such arrangements for advertising and promoting the Association as they deem advisable.

10. No member shall accept a school at a salary lower than that paid to the previous teacher; but any school which provides a regular increase in salary due to experience and time of service in the district shall be excepted.

With your assistance we shall have a progressive organization. Do not procrastinate, send your names at once to some member of the Executive.

The Secretary acknowledges with thanks the receipt of membership fee from Miss Jean McNaughton, Moncton, N. B.

E. D. MACPHEE,
Secretary-Treasurer.

Sackville, N. B.,
November, 24, 1914.

Following the example of Canada, the Australian Senate has voted to prohibit the sale of alcoholic liquors in military encampments. In Canada, a man who returns to the barracks drunk is placed in the guardroom for his first offence. The second time he comes back drunk, he is dismissed from the service. It is proposed to adopt the same rule in the United States military and naval service.

Over one hundred new post offices have been established in Canada since last July; most of them, of course, along the new lines of railway.

PREPARATION FOR CHRISTMAS IN THE PRIMARY GRADES.

"It is Christmas in the Mansion,
Yule-log fires and silken frocks;
It is Christmas in the cottage,
Mothers filling little socks.

It is Christmas on the highway,
In the thronging, busy mart;
But the dearest, truest Christmas
Is the Christmas in the heart.

The mention of December calls forth a pleasant thrill of anticipation. It is the crowning month of the year for the children, for does not December bring Christmas, and does not Christmas suggest all kinds of fun and mystery, including Santa Claus with his reindeer and pack of toys?

In preparing for Christmas in the school-room, it is a good plan to begin early in the month, otherwise the Christmas preparations may become a burden and the Christmas spirit be lost. How can we best give to the children the true meaning of Christmas? The first morning let us attempt the story of the Christ-Child. Tell how the people of Bethlehem were looking forward to the coming of a great and good King; how one night when all the houses were filled with visitors, a little Baby came to Bethlehem, and for lack of room was laid in a manger. This little Baby when He grew up was the good King looked for. Impress on the children, the fact that the Christmas so looked forward to by them is this little Baby's birthday. Show the school a picture of the "Nativity," and begin to teach the Christmas story as found in St. Luke II. 8-14. Luther's "Cradle Hymn" seems very appropriate at this point.

The next morning continue the story by telling about the shepherds of Bethlehem. Tell how they were out all night caring for the sheep and the little lambs; how they were startled by a bright light in the sky. Tell of the chorus of angels, and the angel who came to them and told them of the little Baby lying in the manger in the town.

"The Apparition to the Shepherds"—Plockhurst; "Adoration of the Shepherds"—Murillo; or "Holy Night"—Corregio, are good pictures to show at this time. Teach the words sung by the chorus of angels. They form one of the verses

of the passage the school is learning from St. Luke.

Another morning we might show the picture, "The Worship of the Magi"—Hoffman; or "Adoration of the Magi," Durer, and continue with the story of the Wise men. Picture the long journey across the desert on camels, the bright star that guided them to the Christ Child, and the gifts brought by the Wise men. Here we have the first Christmas gifts. This is a good time to speak about the pleasure of giving. What makes Christmas.

"Little wishes on white wings,
Little gifts—such little things—
Just one little heart that sings,
Makes a Merry Christmas."

Yes! Merry Christmas let it be:
A day to love and give.

—Lucy Larcom.

Other mornings the children will enjoy hearing about Christmas as kept by the children in other lands,—in Holland, France, Germany and Norway. Again, the custom of carol-singing by the children of England is interesting, and this verse from "The Waits" by Margaret Deland illustrates the custom.

"At the break of Christmas Day
Through the frosty starlight singing,
Faint and sweet and far away,
Comes the sound of children singing, singing,
Chanting, singing.

We all believe in the influence of environment, so we must begin early to make the school-room suggest Christmas. Christmas decorations should have a meaning and teach something to the children. As our Christmas talks go on, the star or angel at the top of the Christmas tree gathers new meaning; the bells swinging in the door or window call up some of the Christmas verses. Here is one of many about bells.

"In a chime of bells
So sweet and clear
The song of the Angels
You can hear;
As if each little glad-hearted bell
The story of Christmas tried to tell."

The picture "Christmas Chimes," Bashfield, goes nicely with this verse.

Each teacher has her own idea of school-room decoration. The chief essential is that the decorations be simple and largely of the children's

handiwork. If possible, have a Madonna hung where the children can see it. A drawing on the board of Santa Claus and his reindeer, or Santa going down the chimney is always appreciated.

One of the first things to claim our attention is a Christmas border for the blackboard. Here, a variety of subjects present themselves. Our border may be holly, mistletoe, ringing bells or stars; or the reindeer and camels cut from paper by the children may be utilized for this purpose. The smallest child can make paper chains, and one year we had full length curtains for our windows of chains in holly red made by the children; another year, we used a good sized fir tree for decoration, trimmed with the results of our paper-folding and cutting for the month, which consisted of green and red paper sleds, stars with a small picture of the Madonna pasted in the centre, bells, stockings, etc.

There is no necessity in this article for mentioning Christmas music. Anyone wishing suggestions on that subject has but to read Mrs. Lawrence's "Christmas Carols for Schools" in the November "REVIEW;" but I would like to add this selection from "A Christmas Party," by Lizzie Haley. It seems to embrace the whole Christmas story in verse.

(CHILDREN)—

Oh, don't you know the story
Of the first Christmas time?
Then listen, we will tell it,
While the bells so sweetly chime"

(FIRST CHILD)

We count the years by hundreds,
Since that first Christmas day
When in a lowly manger
The little Christ-Child lay.

(SECOND CHILD)

That night, some shepherds tending
Their flocks upon the hill,
Heard heavenly voices singing
"Peace, peace! On earth good-will."

(THIRD CHILD)

All bright as noon-tide splendour
A light above them shone,
While louder sang the angels
"A Saviour hath been born."

(FOURTH CHILD)

And then a sudden darkness —
The voices died away,
The wondering shepherds hurried
To where the young Child lay

(FIFTH CHILD)

Their flocks were all untended,
While filled with love and awe,
They bent above the manger
And the Baby Jesus saw.

(SIXTH CHILD)

Then too, the wise men watching
Beheld a star that shone
In the blue heavens above them
To tell that Christ was born

(SEVENTH CHILD)

And with their camels laden
With spices and with gold
They came from Eastern countries
The young King to behold.

(EIGHTH CHILD)

The star still went before them
And pointing out the way
It shone upon the stable
Where the Babe of Bethlehem lay

(NINTH CHILD)

And then all lowly bending,
They worshipped the young King,
And gave Him from their treasures
Full many an offering.

(CHILD REPRESENTING ST. NICHOLAS)

Oh children, we have numbered
Long centuries since then,
But we see at every Christmas
That little Child again.
And we bring to all good Children
In memory of that time
Some pretty Christmas present
While the joy-bells gladly chime.

SNOWFLAKES.

Little white feathers, filling the air —
Little white feathers! how came ye there?
"We came from the cloud-birds sailing so high;
They're shaking their white wings up in the sky."

Little white feathers, how swift you go—
Little white feathers, I love you so!
"We are swift because we have work to do;
But hold up your face, and we'll kiss you true."
—*Mary Mapes Dodge.*

THE BIRDS' CHRISTMAS TREE AND DINNER.

It is not necessary that the birds' Christmas tree be a spruce or a pine. Any little tree growing in the home or school yard will do. If a branch is used instead of a tree, it may be fastened to one of the window boxes outside. It will be a pleasure to watch, from the window, the bird visitors as they remove their gifts from day to day. If the tree is placed in the yard an opera glass kept on the window-sill will be a great help.

One gift the birds will enjoy is a large piece of suet, or several small pieces. These may be tied to the tree. The popcorn strings used for decoration of the children's tree may be given the birds after it has served its purpose in the home or school.

Save bits of bread and scrapings from the table, mince these fine, and mix with them canary seed, hemp, sunflower seed, peameal, buckwheat, cracked corn or other cereals, broken nuts and dried fruits, and place them where the birds will find them. One or more little baskets of seeds may be fastened to the tree, or a little basket of crumbs or grain. The bluejays are fond of chestnuts and corn, and pine cone seeds.

Ask at home for unsalted meat bones that have had the meat cut from them, and tie these to the trees. The birds like to pick them.

The birds are fond of frozen milk, and a little cup or tin of this might be added to the Christmas feast. But the most acceptable food one can offer is the oily peanut. Crush the nuts and place them in the tree boxes or on the ground, or tie the unroasted peanuts by strings to the tips of as many twigs as can be reached. Then watch the fun. There will be no lack of guests at this feast.

In Norway, Sweden and France the animals are always remembered at Christmas time, an extra portion of food being provided for them. A sheaf of wheat is placed in front of each house for the birds. The horses, the cows, and the dogs and cats are given a fine supper at Christmas.—“*Western School Journal*.”

The Christmas Bells, so soft and clear,
To high and low glad tidings tell,
How God the Father loved us well.

—JOHN KEBLE,

CHRISTMAS POEMS AND QUOTATIONS.

Rejoice and be merry, set sorrow aside,
Christ Jesus, our Saviour, was born at this tide.

In Bethlehem, in Jewry,
This blessed Babe was born,
And laid within a manger,
Upon this blessed morn.

Rejoice, O Earth, thy Lord
Hath chosen Him his holy resting-place.

Shepherds and kings, with lambs and frankincense
Go and atone for mankind's ignorance:
Make ye soft savour from your ruddy myrrh.
Lo, how God's son is turned God's almoner,
Give ye this little
Ere He give ye all.

“Remember the poor when the snow comes down,
And covers the earth with a Christmas crown,
Ye watchers and workers about the town.

“Remember the poor in the great highway,
The pitiful waifs that a-hungred stray.
For the sake of the Christ-child born to-day.

“Remember the poor where the board is spread,
When there's plenty of meat and plenty of bread,
By Him was the needy multitude fed.

“The Holy Supper is kept indeed
In whatso we share with another's need;
Not what we give, but what we share,
For the gift without the giver is bare;
Who gives himself with his alms feeds three,
Himself, his hungering neighbor, and Me.”

In comes Christmas, like a king,
Dressed in white and crowned with gold;
In his kindly arms he'll bring
Gifts of love for young and old.

CRADLE HYMN.

Away in a manger, no crib for a bed,
The little Lord Jesus laid down His sweet head.
The stars in the bright sky look down where He lay —
The little Lord Jesus asleep on the hay.

The cattle are lowing, the baby awakes,
But little Lord Jesus no crying He makes.
I love Thee, Lord Jesus! Look down from the sky
And stay by my cradle till morning is nigh.

—MARTIN LUTHER.

THE STAR.

When the birds and bees and flowers
All have gone to bed,
Did you ever see a star
Shining overhead?

Many, many years ago
In a land 'afar,
Wise men followed all the night
Such a little star.

And it led them to a barn,
Where among the hay
Safe within His mother's arms
Christ, a Baby lay.

—FLORENCE L. PATTERSON.

CHRISTMAS SONG.

"Why do bells for Christmas ring?
Why do little children sing?

Once a lovely shining star
Seen by Shepherds from afar
Gently moved until its light
Made a manger's cradle bright.

There a darling baby lay
Pillowed soft upon the hay,
And its mother sang and smiled,
This is Christ the Holy Child.

Therefore bells for Christmas ring,
Therefore little children sing."

—EUGENE FIELD.

Then pealed the bells more loud and deep,
"God is not dead, nor doth He sleep!

The Wrong shall fail,
The Right prevail,
With peace on earth, good-will to men.

—LONGFELLOW.

CHRISTMAS.

Christ, Christ is born today!
Holy be thy holiday,
Rise betimes, and haste away,
In thy church to kneel and pray,
Surely from thine heart to say;
Thou, O Lord, will I obey.

Many poor around there be—
Alms give thou, and sympathy,
So God's blessing light on thee.

—LADY LINDSAY.

WHO, WHAT AND WHERE.

No. III.

CONCERNING CHRISTMAS.

1. What king of England was crowned on Christmas Day?

2. What king ministered to the poor on the day after Christmas?

3. What are the traditional names of the "three kings of Orient?"

4. In what Christmas stories or poems do the following appear:—Mrs. Fezziwig, Prince Bulbo, the Tetterbys, Sarah Maud Ruggles, Prancer and Dancer?

5. Complete the following quotations, and name the author:

(a). Some say that ever 'gainst that season comes, wherein our Saviour's birth is celebrated—

(b). But peaceful was the night,
Wherein the Prince of light—

(c). Heap on more wood, the wind is chill,
But let it whistle as it will—

(d). Again at Christmas did we weave the holly—

6. What Treaty of Peace was signed on Christmas Eve?

ANSWERS TO NOVEMBER QUESTIONS.

1. Tennyson.—"I do but sing because I must." *In Memoriam*. 21.

2. William Morris.—"The idle singer of an empty day." *Apology. The Earthly Paradise*.

3. Milton.—"That one talent which is death to hide Lodged with me useless."
—*Sonnet on his own Blindness*.

4. Chaucer.—"——ther is game noon
That fro my bokes maketh me to goon,
Save, certaynly, when that the month of May
Is comen—Farewell my book."
—*Prologue to Legend of Good Women*.

5. Longfellow.—"More than this; thy name reminds me
Of three friends, all true and tried;
And that name, like magic, binds me
Closer, closer to thy side."
—*To the River Charles*.

6. Wordsworth.—"Two shall be named, pre-eminently dear,—
The gentle lady married to the Moor,
And heavenly Una, with her milk-white Lamb."
—*Personal Talk III*.

LORD ROBERTS.

Sir Frederick Sleigh Roberts, Baron Roberts of Kandahar and Waterford, K. P.; G. C. B.; G. C. I. E.; V. C.; D. C. L.; LL. D., the son of General Sir Abraham Roberts, was born at Cawnpore, India, in 1832, and educated at Clifton, Eton and Sandhurst. In 1852 he went to India as second lieutenant in the Bengal artillery. He served with distinction during the Indian Mutiny, going to the relief of Lucknow under Sir Hope Grant, and after that winning his Victoria Cross by rescuing the colours from the Sepoys. In 1863 he was sent on special service against the hill tribes on the northwest frontier of India, and in 1868 he joined the expedition of Sir Robert Napier (afterwards Lord Napier of Magdala) to Abyssinia, and was sent as the bearer of final despatches to London.

His most brilliant feats of arms were performed in Afghanistan. The Afghan war broke out in 1878. Roberts, in command of the British force, traversed the wild and difficult Kurram valley, forced the Afghan fortress of Kotul, and occupied Kandahar. Peace was proclaimed, but in the following year Roberts was called upon to avenge the slaughter of the British Embassy at Cabul and to take possession of that city. In 1880, the Afghans under Ayoob Khan, proclaimed a holy war against the British and inflicted a crushing defeat on General Burrows at Maiwand. A remnant of the British made their escape to Kandahar, which was threatened by the Afghans. But Sir Frederick Roberts, with 10,000 picked men, marched to relieve it from Cabul. A march of 318 miles through a trackless and dangerous mountain country, infested by hostile tribes, and cut off from all communication, was made in twenty-three days. Kandahar was relieved, the Afghan force cut to pieces and all their artillery captured. This is one of the greatest military exploits of modern times. General Roberts received the thanks of both houses of Parliament, the freedom of the city of London, and was summoned to Windsor by Queen Victoria. After the disaster of Majuba Hill, he was sent to South Africa as commander, but peace was made while he was on his way out. In 1881 he returned to India as commander-in-chief of the Madras army. From 1885 to 1893 he was commander-in-chief in India. He

7. Browning.—“Open my heart and you will see
Graved inside of it, “Italy,”
—*De Gustibus*.

8. Kipling.—“So thank I God my birth
Fell not in isles aside —

* * * * *
Comfort it is to say
Of no mean city am I.”

—*Dedication of the Seven Seas*.

9. Scott.—“Because Byron *bet* me.”

10. (a). Gray.—“Here rests his head, etc.”

—*Elegy in a Country Churchyard*.

(b). Keats.—“Here lies one whose name was writ
in water.”

—*Milner's Life of Keats*.

(c). Stevenson.—“This be the verse you grave for me
Here he lies where he longed to be.

—*Requiem*.

COMMENTS ON ANSWERS TO OCTOBER QUESTIONS.

Numbers 3 and 8b, were not attempted, and 8e, by only one. Scott's fine passage on Pitt, Nelson and Fox ought to be better known. “The Loss of the Birkenhead” is familiar to people trained in the “Royal Readers.” M. V. L. gave Josiah, king of Judah, as well as Ahab, in answer to 2, and gets double marks. M. V. L. also gave “Reverence for the laws ourselves have made;” a good answer to 7, but the line we chose is more obviously applicable, and is given by several persons. “A kingdom topples over with a shriek,” seems hardly fair to the loyal and valiant Belgians. Some people lost marks in 8 by careless reading of the question. “The Battle of Dorking,” has been found in a book called “Our Children's Songs” but is anonymous. Prince Rupert was not “King Charles' son” but his nephew. “Lord Alfred Tennyson” is an incorrect form of the poet's title.

MARKS. 30 allowed. M. L. L. Club, 19; M. V. L., 13; B. H. C., 11; G. B., 7; J. E. M., 6; M. L. M., 15; A. L. F., 12.

COMMENTS ON ANSWERS TO NOVEMBER QUESTIONS.

No. 4. Jill quotes from Wordsworth's

“It is the first mild day of March,” and gets half marks.

No. 5. Was not attempted, and No. 8, not correctly answered. The quotation from St. Paul from whom, of course, Kipling, quoted, does not quite fit the wording of the question.

No. 10. Coleridges' “Stop, Christian passer-by” and the epitaph on Shakespeare in Stratford church, “good friend, for Jesus' sake forbear,” were cited, as well as the words of Keats and Stevenson.

Jill's very good paper is welcome.

It is hoped that the Christmas questions will bring more answers. Will correspondents *please* read the rules and questions *carefully*.

Marks allowed, 20. M. V. L. 11; M. L. L. Club. 14; Morleena Kenwigs 9. Jill. 13.

was raised to the peerage in 1892, with the title of Baron of Kandahar and Waterford. In 1893 he left India; in 1895 he was made a field marshal, and appointed commander-in-chief of the forces in Ireland. After the first serious reverses of the British in the South African war, Lord Roberts was appointed commander-in-chief, superseding General Buller, and went to the front with Lord Kitchener as his chief of staff. Defeat was soon turned into victory, and after the relief of Kimberley and the surrender of Cronje, Lord Roberts returned to England, where he was created Earl of Kandahar, Pretoria and Waterford, and Knight of the Garter. He held the post of commander-in-chief of the British army from 1901 until 1904, when he retired from active service. He never ceased to work for his country but after his retirement, did his utmost by speaking, writing, and organizing, to encourage military training and to prepare the nation for the present ordeal, which he clearly foresaw. His last utterances in print were, the message about the war to the children of the Empire, referred to in the November REVIEW, and "the Supreme Duty of the Citizen at the Present Crisis," an article written for the Hibbert Journal from which we quote on another page. His last public speech was made at Salisbury Plain on October 24th, to the Canadian troops, of whom he was Honorary Colonel. He died on November 14th, in France, where he had gone to greet the Indian troops who had come to the service of the Empire. He was buried in St. Paul's Cathedral, beside Nelson and Wellington, with whose names and examples his will live.

"—his work is done
But let his great example stand
Till through all lands, and in all human story
The path of duty be the way to glory."

We quote the following verses from Kipling's poem on Lord Roberts in the London "Daily Telegraph" of November 19th.

Clean, simple, valiant, well-beloved,
Flawless in faith and fame
Whom neither ease nor honours moved
A hair's breadth from his aim.
Never again the war-wise face,
The weighed and urgent word
That pleaded in the market-place,
Pleaded and was not heard.

Yet from his life, a new life springs
Through all the hosts to come,
And glory is the least of things
That follow this man home.

LORD MEATH EMPIRE DAY CHALLENGE CUP AND LEAGUE OF THE EMPIRE PRIZES.

ESSAY COMPETITION FOR EMPIRE DAY, 1915.

The following are the subjects and conditions for the Essay Competitions inter-all Schools of the Empire for 1915:—

A. SENIOR COMPETITION.

SUBJECT: "For what principles do the British Empire and its Allies stand in the present War?"

PRIZES: A Silver Challenge Cup, value £10. 10s., presented by the Right Hon. the Earl of Meath, K. P., to be held by the school, and a prize of £5. 5s., given by the League of the Empire, is offered for competition to pupils throughout the Empire, who are over 14 and under 20 on January 1st, 1915. The essay must not exceed 2,000 words.

B. JUNIOR COMPETITION.

SUBJECT: "What has been done and what can be done by your country, town or district to help in the present War?"

PRIZES: A Silver Challenge Cup, value £10. 10s., presented by the Right Hon. the Earl of Meath, K. P., to be held by the school, and a prize of £3. 3s., given by the League of the Empire, is offered for competition to pupils throughout the Empire, who are under 14 years of age on January 1st, 1915. The essay must not exceed 1,000 words.

CONDITIONS.

1. All essays must be certified by the teacher, parent or guardian of a child in the following terms:—

"I certify that this essay is the unaided composition of the boy or girl in whose name it is sent in."

Signed.....
Teacher, parent or guardian.

All essays must reach the Central Office of the League of the Empire, 28 Buckingham Gate, Westminster, S. W. London, England, by March 31, 1915.

Further particulars may be had from the REVIEW.

CALLED UP.

(By Dudley Clark in the London Times).

[The following poem takes its title from the lines in Henry Newbolt's "Drake's Drum."

"Call him on the deep sea, call him up the Sound.
Call him when ye sail to meet the foe;
Where the old trade's plyin' an' the old flag flyin'
They shall find him ware an' wakin' as they found him long ago!"

Drake's Drum still hangs at Buckland Abbey. According to legend it is to sound again when England is in danger]

Come, tumble up, Lord Nelson, the British Fleet's a-loom-
ing!

Come, show a leg, Lord Nelson, the guns, they are a-boom-
ing!

'Tis a longish line of battle—such as we did never see;
An' 'tis not the same old round-shot as was fired by you
an' me.

What seest thou, Sir Francis?—Strange things I see
appearing!

What hearest thou, Sir Francis?—Strange sounds I do be
hearing!

They are fighting in the heavens; they're at war beneath
the sea!

Ay, their ways are mighty different from the ways o' you
an' me!

Seest thou nought else, Sir Francis?—I see great lights
a-seeking!

Hearst thou nought else, Sir Francis?—I hear thin wires
a-speaking!

Three leagues that shot hath carried!—God, that such
could ever be!

There's no mortal doubt, Lord Nelson—they ha' done
wi' you an' me!

Look thou again, Sir Francis—I see the flags a-flapping!
Hearken once more, Sir Francis—I hear the sticks a-
tapping!

'Tis a sight that calls me thither!—'Tis a sound that bids
Me "Come!"

'Tis the old Trafalgar signal!—'Tis the beating of my
drum!

Art thou ready, good Sir Francis? See they wait upon the
quay!

Praise be to God, Lord Nelson, they ha' thought of you
an' me!

In God's name cheerly on, courageous friends,
To reap the harvest of perpetual peace
By this one bloody trial of sharp war.

—Shakespeare.

You cannot think that the buckling on of a knight's armour by his lady's hand was a mere caprice of romantic fashion. It is the type of an eternal truth—that the soul's armour is never well set to the heart, unless a woman's hand has braced it; and it is only when she braces it loosely that the honour of manhood fails.—*Ruskin.*

ENGLISH COMPOSITION IN UNGRADED SCHOOLS.

SUGGESTIONS FOR EXERCISES.

1. Find five questions in any book, and copy them, making neat question marks.

2. Copy five sentences from the board, and under each one write the statement turned into a question, like this:

The leaves are red and yellow.

Are the leaves red and yellow?

3. Write questions to fit these answers:

(1). I have done five examples. (2). I saw two ducks. (3). It is half-past ten. (4). I like apples best. (5). That is a maple. (6). Mary is ten years old.

4. Copy the following, dividing it into six sentences. Begin each sentence on a new line, and with a capital, and put a full stop at the end of each. The room is dark it is going to rain the birds have gone to their nests there are no leaves on the trees I can see the river a man is driving up the hill.

5. Write ten sentences beginning with "Shall I?" asking your teacher if you are to do certain things; like this:—Shall I open the window? Shall I collect the books?

6. Write ten or twelve lines about a dog that you know. Tell his name, his colour, what he likes to eat, where he sleeps. What he can do.

7. Write sentences telling in what way each of these creatures is useful:—cat, hen, cow, pig, horse, duck; like this:—The cat catches mice.

8. Write in full; isn't, wasn't, doesn't, hasn't, haven't, aren't, weren't, don't. Use each of these contractions in a sentence, placing the apostrophe properly.

9. Pick out ten contracted forms from any book; write them in a list, and put the full form after each.

10. For what do the following abbreviations stand:—a.m., Ave., anon., bbl., A. D., Co., cwt., Esq., etc., O.H.M.S., B.A., M.P., MS., R.F.D.?

11. Write a little story containing these words:—writer, boy, brother, school, snow, deep, dangerous, return, excuse, honour.

12. Write a telegram containing an important message, in ten words. (The message may be suggested by the teacher.)

CURRENT EVENTS.

The antimony mines in New Brunswick are to be reopened and can probably now be made to yield some profit, the price of the metal having advanced because of the war.

The number of immigrants reaching the United States from Europe since the war began is less than one-fifth of the number in the corresponding period last year. Immigration to Canada has practically ceased.

That the war injures other nations besides those actively engaged in hostilities is strikingly shown by the passage of an emergency war tax bill in the United States. This measure provides for a stamp tax, which is expected to yield a hundred million dollars to make up for the loss of revenue on imports.

The United States troops have been recalled from Mexico. Just why they should be recalled now, when affairs in Mexico are in greater confusion than ever, is hard for us to understand. Their presence at Vera Cruz would seem to be more needed now than it was when they landed there, seven months ago. Carranza, who assumed the government of the country after the departure of Huerta, has been driven from Mexico City by the approach of the rebels from north and south. Three days after the United States soldiers and marines left Vera Cruz, Carranza entered, and proclaimed that city the capital of the republic. Meanwhile Zapata, the leader of the southern rebels, and Villa, the leader of those in the north, reached the suburbs of Mexico City; and the Zapata forces took possession and preserved order. Carranza expected that Villa and Zapata would quarrel; but they seem to be working in harmony, apparently both recognizing the authority of Gutierrez, who was appointed Provisional President by the recent peace convention with a hope of uniting all parties. A third government is said to have been added to these two by the action of General Gonzales in proclaiming himself Provisional President and appointing a cabinet. He is now approaching the city of Mexico with an army of ten thousand men.

Theodore, a successful revolutionist, is now in full control of the government of Haiti. In Santo Domingo, there has been an election for president, the result of which is still in doubt; and a United States ship has been sent to the capital to preserve order.

The island of Cyprus, which nominally formed a part of the Turkish Empire, was formally annexed by Great Britain on the fifth of November. The island has been occupied and administered by Great Britain since 1878.

The fourth month of the war has come and gone with little change in the situation in France and Belgium. The fighting has been continuous and heavy; but the efforts of the Germans to break through the lines of the Allies and reach Dunkirk and Calais were without avail. Here time is telling in favour of the Allies. The French army is kept at its full strength, and will soon be provided with the field guns of which it was in need. The British army has been largely reinforced by the arrival of fresh troops from England; and the Belgium army is reformed, making a valuable addition to the forces. The Germans are now outnumbered, but will probably not be forced to retire until spring, when the Allied armies will be ready to follow them across the Rhine.

We know less of the movements in Russian Poland, where the second advance of the Germans against Warsaw has been checked, and where one of the greatest battles in the history of the world has occurred, or is still in progress.

In Galicia, the main Russian campaign is against Cracow, which is strongly fortified and will not be easily reduced. One Russian army is approaching it from the east, and another from the north. Cracow is the capital of Austrian Poland, and the Poles may surrender the city to the Russians to save it from destruction. The fortress of

Przemysl, which the Russians have passed on their way to Cracow, is still under siege. A small Russian force which crossed the Carpathians is said to have been defeated by the Austrians on the plains of Hungary.

Servia is in great danger of being conquered by the Austrians, and has appealed to Russia for help. Belgrade, the former capital, has been captured; and the Servian army has been reduced from two hundred thousand to half that number by the three months fighting. (By the way, Servia is another name that has been changed by the war. We must write it Serbia now, for the Serbs very strongly object to our way of spelling it.)

The war in Asia Minor thus far consists of the march of a Russian army towards Erzerum, without much opposition. The Armenians welcome the Russians as deliverers from the Turkish yoke. Just as Poland was divided between Russia, Austria and Germany, so Armenia was divided between Turkey, Persia and Russia; and just as Russia has promised, if victorious in the war, to unite Poland again under the Russian crown, so she may be expected to reunite Armenia, for Persian Armenia is virtually already in Russian hands.

A Turkish army is threatening the Suez Canal; but this movement was expected, and the place is strongly defended by Indian and Australian troops. British Indian troops have also occupied a Turkish stronghold at the head of the Persian Gulf.

The first great victory for the Allies has been won by the Japanese, with the assistance of British and French warships and a few British troops from India. After a siege of seventy-four days, the Japanese troops entered the fortress of Tsing-tao on the morning of the sixth of November; and with it the Chinese territory of Kiaochow was lost to Germany. Japan will administer the territory until the close of the war, and then will open negotiations for its restoration to China.

At sea, the British have lost two ships in a battle with a German fleet off the coast of Chile, and a swift German cruiser which had been preying upon British commerce in the Indian Ocean has been destroyed by an Australian cruiser.

Portugal is ready to enter the war, both for the protection of her own territories in Africa, which have already been invaded by the Germans, and because of an alliance with Great Britain which dates from 1703, under the terms of which Wellington and his army went to the assistance of Portugal a hundred years ago. The proclamation of a holy war by the Sultan of Turkey may lead to an uprising in Africa which will bring Italy into the conflict on the side of the Allies.

The French government, which moved to Bordeaux when the Germans were near Paris, has now returned, and Paris is once more the capital of the country.

On the first news of famine in Belgium, the San Francisco chamber of commerce collected in one hour a hundred thousand dollars for the purchase of food supplies. Other places were as quick to respond, and ships loaded with food and clothing from both the United States and Canada have gone across the ocean on their errand of mercy. More must go, for the need is urgent. Many of the stricken Belgians have taken refuge in England, and many more in Holland, where the government is providing for their support. In Galicia, also, where the country has been swept by two armies, there is great distress.

General DeWet, the rebel leader in South Africa, has been captured, and the rebellion may be considered as ended. His few followers are so scattered that they will probably not rally again.

Twenty-four hour time has been officially adopted in France, and a watch dial is made on which by a slight movement the figures from 13 to 24 are brought into view instead of the figures for the morning hours, 1 to 12. The plan more generally adopted, however, is that which came into use here when twenty-four hour time was first

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N. B. OFFICIAL NOTICE.

It has come to the notice of this department that certain book agents are improperly taking up the regular time of the schools and imposing books or apparatus upon teachers and trustees, alleging that the same has the approval of school officers of the Education Department.

No agents for Books or apparatus have received the endorsement or approval of this department. No books so purchased will receive the library grants given under section 96, School Manual.

W. S. CARTER,
Chief Superintendent of Education.
Education Office, Nov. 4, 1914.

Nova Scotia School Calendar, 1914-1915.

Dec. 19—First day of Christmas vacation.

1915.

Jan. 4.—Public Schools re-open.

Jan. 5.—Normal College re-opens.

Jan. 29.—Last teaching day of first half school year.

The full number of teaching days in the half school year ending January 29th is 103.

The Teachers' Institute

— OF —

CARLETON and VICTORIA
COUNTIES

WILL MEET IN THE

Fisher Memorial School, Woodstock,

On December 17th and 18th.

F. C. SQUIRES,
President.

W. S. DALEY,
Sec'y-Treas.

used on the Intercolonial Railway, by which the figures for the morning hours remain in their places, and those for the afternoon appear in an inner circle.

Three expeditions were sent to Hudson Bay last summer to report upon the fisheries. The party which went to the east coast of James Bay found conditions excellent for establishing a whitefish industry north of the East Main river; and the Indians say that large quantities of cod can be obtained there in February and March. It may be assumed that the latter statement needs confirmation.

It is stated that not a drop of strong liquor can be obtained anywhere in the Russian dominions. The sale of intoxicants was forbidden as a war measure at the time of the mobilization of troops; and it worked so well that the prohibition will be continued at least until the end of the war. In France, also, the sale of absinthe and similar drinks is prohibited during the war.

Arizona, Colorado, Oregon, Virginia and Washington voted for prohibition of the liquor traffic at the late fall elections. With Georgia, Kansas, Maine, Mississippi, North Carolina, North Dakota, Oklahoma, Tennessee and

West Virginia, which had already voted out the traffic, this makes fourteen prohibition states; and it is probable that two more, Idaho and Alabama, will soon be added.

The following kindly notice of the REVIEW appeared among the Literary Notes of the St. John Globe on Saturday, October 24th.

A little magazine that escapes general attention, or is perhaps regarded solely as a technical production, is the EDUCATIONAL REVIEW, edited and published by two Saint John women, Miss Eleanor Robinson and Mrs. George U. Hay. Of course, this magazine is intended for the use and benefit of teachers in city and country schools, and for others who are directly interested in the education of the young. In addition, however, to the specific value of the magazine, it has a literary and educational value that should appeal to many outside the direct field of its present range. In recent issues a carefully compiled column of Current Events, just now chiefly devoted to war notes, is a distinct advantage to the teacher who has to answer many questions or who wants to keep her pupils alive to that which is happening beyond the covers of his school books. A series of notes on High School Literature, dealing especially with *The Lay of the Last Minstrel*, are especially to be commended because they deal with many points not to be found in the annotated editions of the poem, and because they are presumably from the pen of an able student of English literature, Miss Eleanor Robinson. Two series of nature studies by Mr. Perry and Mr. DeWolfe, and a literary contest, *Who, What and Where*, begun in the October issue, are other notable features of the REVIEW. The high standard to which the paper attained under its founder, the late Dr. G. U. Hay, is being admirably maintained by Miss Robinson. The EDUCATIONAL REVIEW occasionally issues a presentation photo. With the October number an excellent portrait of the King is printed on a loose sheet, and is admirable for school or home use.

SCHOOL AND COLLEGE.

At the close of the Westmorland County Teachers' Institute, the teachers of Sackville Parish in private session formed a Sackville Parish Teachers' Association.

The offices elected were: President, E. D. MacPhee; Vice-President, Miss Mollie Peacock; Secretary-Treasurer, Miss Hattie I. Milner.

The first sessions of the Association were held in the library of the Sackville High School on November 13th and 14th. Teachers were present from almost all parts of the Parish.

The programme was as follows:

1st Session, 7.30 p. m., November 13th.

Address — President, E. D. MacPhee.

Nature Study — J. A. Edmonds.

Question Box.

2nd Session, 9.00 a. m., November 14th.

Writing in Elementary Grades — Miss Rheta Inch.

Metric System — Miss Mayme V. Alward.

Composition in Intermediate Grades — Miss Mollie Peacock.

The subjects chosen were handled very efficiently, and evoked very general practical discussions. The Association, though somewhat of a venture, in so far that it is believed to be the only Parish Association in existence, has shown itself to be of as much practical value as any Teachers' Institute.

The next session of the Association will be held in late February or early March.

Mr. Carl W. Borden, a graduate of Mount Allison, has been engaged as Instructor in Manual Training on the Sackville High School Staff.

Miss Henrietta Thompson, of West St. John, has resigned, after teaching for thirty-six years.

The regular course at the Nova Scotia Agriculture College opened on November 3rd, with a very good enrolment.

Miss Borden has taken the place in the primary department of the Hantsport, N. S., school, left vacant by Miss V. Davison's resignation on account of illness.

King's College is represented on the chaplain's list of the Canadian contingent by Rev. D. V. Warner, Rev. G. M. Ambrose and Rev. A. L. L. Skerry. Other graduates and under-graduates who are now on service at home or abroad, are E. Jeffrey, G. Mason, H. W. Campbell, A. L. Collett, L. deV. Chipman, A. C. Morris, Major J. P. Silver, A. W. Cunningham, J. R. Jones, C. M. Bowman, and Colin Campbell.

There has been a very large increase in the number of students attending the evening classes of the Technical College continuation schools in Halifax.

As a result of the war, there will be only seven cadets for the graduating classes at the Royal Military College this year. Over twenty are now at the front. There is

a movement on foot to have the present college course discontinued this term and the whole time of the staff given to the training of officers for the war. — "*Acadian Recorder*."

The Ontario Department of Education, following the example of the British Minister of Education, is making arrangements to send a large number of circulars to the teachers, giving them, in brief form, information on the causes of the war and the Empire's share therein, and advising them to discuss the subject with their classes.

In Yarmouth, N. S., the evening classes in sewing, under Miss Perry and in electricity under Mr. John Ross, have grown so large that they have had to be divided.

The Yarmouth School Board lately passed a resolution to appoint no teacher who does not hold a B certificate, or higher, with first class professional qualification.

Charlottetown, P. E. I., has organized a school and home association, with the object of increasing understanding and sympathy among parents and teachers. The meetings are held in the School Board rooms. On October 30, Mrs. J. A. Matheson addressed the society, describing schools that she had lately visited in Western Canada.

The people of Wolfville, N. S., lately expressed in a formal resolution at a public meeting their hearty appreciation of the excellent work accomplished by Mr. Ford, as principal of the High School during the last eighteen years.

Miss Jessie Weyman, B. A., is principal of the Gagetown, N. B., Grammar School.

J. C. Hanson, B. A., is principal of the Consolidated School at Riverside, N. B.

Miss Kathleen Kirk, B. A., is teaching Latin, English and History in the Sussex Grammar School.

Rev. Canon Powell has resigned the Presidency of King's College, Windsor, N. S., in order to take up parish work. His resignation takes effect in May, 1915, at the end of five years of service as College President.

Mr. Leo Moore, principal of the Marysville, N. B., school, has resigned.

Mr. A. J. Finlay has been elected chairman of the School Board in Halifax, N. S.

Mr. W. H. Waddell, for many years a prominent teacher in Halifax, died in Florida last month. Mr. Waddell was the last surviving member of the first managing committee of the Protestant Industrial School. He was first assistant-master in the old Grammar School, and then principal of the Arnold School, and not only an admirable teacher, but a public-spirited worker in educational and philanthropic circles.

The Senate of the University of N. B., has decided to grant degrees to members of the senior class, enlisting with the second Canadian contingent. To recruits from the junior class will be granted their year, and from the other two classes, credit for their full term's work.

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THE EDUCATIONAL REVIEW,
St. John, N. B.

The wall card containing Lord Roberts' message to the children of the Empire on the causes of the war may be had from the Church Book Store, 116 Germain Street, St. John.

The Nova Scotia Technical College has issued a Calendar setting forth the opportunities offered to those who cannot take a full Technical Course, by their short courses, which are held from January 5th to March 6th. Prospective students must have had a good common school education and satisfy the Principal that they are able to profit by the course. The fee for each course is \$15, and a diploma may be secured by work reaching the required standard.

The Council of Public Instruction of Nova Scotia has ordered that "a B.A. or B.Sc. from a recognized university may be accepted in qualifying for a teacher's license as the equivalent of a "Teacher's Pass of Grade XII."

A "recognized" university is defined in Regulation 119 (2) as follows: "No degree or university shall be *recognized* unless the course is proven to be at least one of four years following the Provincial high school pass of Grade XII, or a matriculation standard shown to be its virtual equivalent."

Amidst all the work that is being done for the comfort and relief of our soldiers at the front, care for the horses is not neglected. Lady Smith-Dorrien, wife of the well known general, is President of "Our Dumb Friends League," a society for the encouragement of kindness to animals. This society manages what is called the "Blue Cross Fund" which supplies horse ambulances, drugs and other necessities for sick and wounded horses, and provides means and instructions for putting them painlessly to death, if need be.

Nor need the dumb animals be forgotten in our prayers to Him who feedeth the ravens, and marks the fall of a sparrow. The following prayer is said by the Russians, and might well be adopted by their allies:

"And for those also, O Lord, the humble beasts, who with us bear the burden and heat of the day, and offer their guileless lives for the well being of their countries, we supplicate Thy great tenderness of heart, for Thou hast promised to save both man and beast, and great is Thy loving kindness, O Master, Saviour of the world.

Lord have mercy."

We acknowledge with thanks the receipt of an exceptionally pretty calendar for 1915 from The Canadian Office & School Furniture Company of Preston, Ontario.

NATURE STUDY OF ANIMALS.

H. G. PERRY.

The first part of this article is devoted to a series of exercises, intended to serve as hints to show how this phase of nature study might be taken up in class; the second part is devoted to a brief descriptive outline of some of the subjects treated in the exercises, and is intended chiefly for the teacher.

1. Nature study exercises on the eggs of insects.

Use twigs of the apple and other trees on which you find the eggs of insects, e. g. the egg-mass of the Cankerworm or the Tent Caterpillar.

1. Introduce the work by showing a few twigs you have gathered for class illustration, with egg masses of the Cankerworm. Note the size of the twigs on which the eggs are usually found. What is the general appearance of the mass? How are the eggs placed and arranged?

After you are certain that the pupils know where to look for the eggs of the Cankerworm, and can identify them wherever found, direct them to search their own orchards and other apple trees near their homes, and each to bring a number of infested twigs for further study.

2. Ask each for a paragraph describing an infested twig. Have a particular twig sketched to accompany the written exercise. Insist on diagrams or sketches to the exclusion of pictures, in ordinary work.

Sketch an egg-mass enlarged, showing the arrangement of the eggs. And in subsequent study see that the following questions are considered: What will grow from each egg? How does this egg compare with the egg of the chick, in size, contents, and nature? Can you form any idea of the relative size of the Cankerworm on hatching? How large when full grown? From the description given in the December "REVIEW," do you think you have ever seen them? On what do they feed? How does this affect the tree and the fruit? What is the egg-laying form, in the life cycle of this insect? How does the orchardist combat these insects?

Discuss the best time of year to spray for (poison) Cankerworms.

3. Have each pupil in your class count the eggs in several masses, and record the number

for each mass. Gather all the data and place the figures on the board, asking the class to copy them and find the average. From the average determine something of the rate of increase of this insect in your locality, supposing the eggs yield males and females in about equal numbers.

What are the natural enemies of these insects? Tell of the work of birds, both in devouring the larvæ and the eggs.

Read accounts of the injury done by these insects, in Hodge's *Nature Study and Life*. Our Provincial Agricultural Reports and Experimental Farms Reports of the Dominion, always devote considerable attention to injurious insects, and frequently make mention of Cankerworms.

4. If you find the egg-rings of the Tent Caterpillar in your locality you may take them up in much the same way. Note that the eggs of the Tent Caterpillar surround the twig, and are covered with a resinous substance which quite obscures the eggs till it has been dissolved off with alcohol.

All the "Reports," mentioned above, have of late years contained references to the injury done by this insect.

5. Look for scales on the bark of apple twigs, similar to those pictured in Fig. 1, c. Poorly nourished trees, in neglected orchards, and along roads and in pastures, are usually badly infested with these scales.

After an introductory lesson, similar to that given on the Cankerworm, ask your pupils to search for Scale Insects, and bring the twigs to school. The search may be extended to a variety of trees and shrubs, as rose bushes, lilacs, hawthorn, mountain ash, red-osier dogwood, etc. Perhaps some one can supply specimens of Scale Insects from house plants. Ferns are especially susceptible to a large scale, which, although not the same species we find on our apple trees, illustrates very well the different phases in the life history of Scale Insect in general.

6. See that each pupil is provided with a twig infested with scales. Study more minutely their shape, size and color. How does crowding seem to affect their shape? Does their color vary on different colored trees? Do you find many scales on the growth of the past summer? Select fresh looking scales from the

growth of the summer before, and place over a black surface (a small square of window glass over a piece of black paper answers admirably) and turn over several scales with a pin or knife point, and examine their contents with a hand lens. You will find small round oval bodies, the eggs, either in the scale or out on the surface of the glass. Note their color. Where is the body of the insect that laid these eggs, and secreted this shell, and lived under it? It died soon after laying its eggs, but its remains are often found at the small end of the shell, close to the eggs. Are the eggs found under all the fresh looking scales of this size? The eggs of the older scales hatched last spring. Of what sex are these insects? The shells of the male insect are smaller (see Fig. 1, e) and you have probably not found them on these twigs. Look for them? In what stage of their life cycle do these insects pass the winter? How are they distributed from place to place?

II. The Oyster-shell Scale.

The Oyster-shell Scale was introduced into America about 125 years ago, and is now found

in all parts where the apple is grown. It flourishes upon a variety of trees and shrubs, but the hawthorn, red-osier dogwood and the apple are its favorites.

The adult female scale, which is the only stage noticed by fruit growers, is about one-eighth of an inch long and scarcely one-third as broad. It is of a characteristic oyster-shell form, tapering towards one end, and is brownish in color, though varying somewhat on different colored bark.

The male scales are in shape like diminutive females, and are rarely seen.

The Oyster-shell Scale passes the winter in the egg stage. The eggs are glossy white, and number from 20 to 100 under each scale. The hatching depends upon the temperature and takes nearly a week, about the first of June, about the time the petals have fallen. During the last of May or the first of June place infested twigs in glasses of water in the school, and watch for the young as they hatch. They appear to the unaided eye as minute specks, slowly crawling in swarms over the twig. Examine them with a hand lens and note the antennæ, and the three pairs of legs, and other characteristics of their insect nature. This makes a good exercise for spring nature study, and affords a good opportunity for reviewing their life history.

The young as they hatch from the eggs are white or cream-colored, and are called larvæ. They spend a few hours, or a day at most, in wandering over the bark, and then settle down, and each inserts its long hair-like sucking tube, proboscis, through the bark, and feeds on the sap of the tree. Life is now easy, and they soon cover their backs with brownish waxy coats, which enlarge as they grow and at last become the familiar brown scales of the adults. The female insects never move after they once settle down; the males on the contrary, when full grown, back out of their shells as tiny two-winged little creatures.

The eggs are fertilized early in July, while the female is yet growing. She reaches her full development in August, and her body is so distended with eggs at that time that it occupies the whole of the cavity beneath the shell. She then begins to lay her eggs, and as the process continues her body gets smaller and smaller,



Fig. 1. Oyster-shell Scale. a, female, from beneath, showing eggs protected by scale, x24; b, female, from above, x24; c, female scale on branch, natural size; d, male scale, x12; e, male scales on twig, natural size.

until by the time they are all laid, it is so small that it can be seen only with difficulty, at the small end of the scale, close to the eggs. She dies soon after, and the life cycle of the species is complete.

We have but one generation of these insects per year, though in countries farther south there are said to be two broods.

The San Jose Scale.

The San José (pronounced, San Ho say) Scale should also be mentioned at this time, as it is one of the worst pests known to fruit growers, and has lately found its way into the Maritime Provinces.

This scale has its native home in China, and was first introduced into San José, California, about 1870, whence it soon unwittingly spread throughout the United States, chiefly on nursery stock. It has been in southern Ontario for over twenty years, but does not seem to make much headway in the colder climate of the northern part. As a rule it is said to flourish in any place where the peach grows. Too much care cannot be exercised when receiving nursery stock from infested regions. Note the fruit laws providing for the inspection and fumigation of such stock. All young trees from such sources should be further inspected as they grow, from year to year.

Fig. 2, shows the San Jose Scale both in its natural size and enlarged. The largest scales

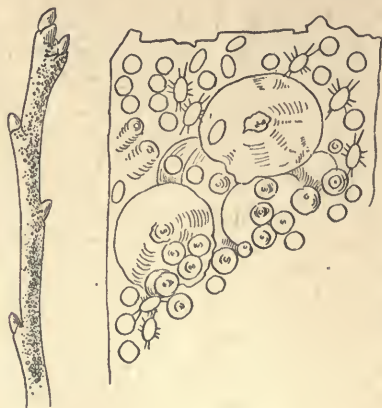


Fig. 2. The San Jose Scale. The twig to left with scales natural size; drawing to right, scales much enlarged.

shown in the picture are the adult female scales and average about 1.5 millimeters in diameter.

They are of an ashy-gray color, and with a minute prominence near the centre. The male scales are somewhat oval in shape, about twice as long as broad, and in length about half the diameter of the female. The other tiny black specks are the scales in which it winters, and are called the black or winter stage scales.

In the spring these small black scales develop into male and female scales respectively. Upon maturity the males back out from beneath their cover as tiny two-winged forms, similar to those of the Oyster-shell Scale. The females do not lay eggs, but bring forth their young alive, producing several young every day for a period of about fifty days, so that the total number of young from each may be over four hundred. Now, since there are four or five generations in a season, it is easily seen that a single pair may be the progenitors of an immense host by late summer; the number has been given as 3,216,080,400. With all these forms sucking up its life sap the poor plant has no chance for growth and little for life.

Careful search should be made for these scales on all recently imported fruit trees and all cases of their occurrence reported at once to the Department of Agriculture for your Province.

Lime-sulphur wash, properly applied, will readily control these two species of scale insects. Directions for making and applying this wash may be obtained from the Department of Agriculture, Ottawa.

Other Scale Insects.

There are more than eight hundred species of scale insects known, and among them many of interest and value to man. Notably the cochineal insect, found on the cactus in Mexico, is the source from which cochineal and carmine are derived; to another, of India, we are indebted for shellac; and a Chinese species yields a white wax. The manna mentioned in the Book of Exodus was probably the secretion of a scale insect, as a similar sweet substance secreted by a scale is used to-day by the Arabs as food.

Fig. 1 is copied from *General Zoology* by Linville and Kelly; Fig. 2, from *Nature Study and Life* by Hodge, with the kind permission of their Publishers, Messrs. Ginn & Co., Boston.

Since the Panama Canal was opened, more than a million dollars has been received in tolls; but the amount is not sufficient to pay the running expenses, to say nothing of the interest on the cost of the canal.

SCHOOL COLLECTIONS.

L. A. DEWOLFE.

In all the larger American cities, a school museum sends its delivery wagon with collections to any school in the city desiring illustrative material. If, for example, a teacher desires to give a lesson on the woodpecker, she applies the previous day for stuffed woodpeckers and samples of their food. Thus, a museum under those conditions has a right to exist. It is not a place for musty *curios* but an educative collection of material in constant use.

Cannot every country and town school have its own collection? In the November number of the REVIEW, the subject of School Collections was opened. May we not discuss it further?

For example, a lesson on our clothing suggests a rather extensive collection of raw material, finished products and by-products. At this season, wool would probably be the first suggested. If wool were not thread-like in its structure, thus permitting its being spun into yarn and woven into cloth, it would not have been useful for clothing. After a little discussion, therefore, the children will draw the conclusion that anything composed of or containing threads or fibers may be useful for clothing; and that some quality makes them useful for many other things.

Let us, then, classify our material woven, spun, or braided from fibers.

Wool, already mentioned, is an animal fiber. Do we know any other? Silk will suggest itself to some one. Here, then, we need collections showing various grades of wool and the various steps in its manufacture. Pictures will help to animate the geography of wool-producing countries, the transportation of the raw material, and the various factory processes; but the lesson has the breath of life breathed into it when the teacher can show real wool from sheep not only of our own country, but from those of same far-off European or Asiatic land.

Silk in its finished form is attractive, but how much more it means if we have cocoons of the silk "worm," mounted specimens of the full-grown moth, mounted twigs bearing the mulberry leaves, and pictures of the countries where the silk worm is grown. It is possible to get these if we really try.

Better than nothing would be a study of the

silken cocoons of our own *Cecropia* Moth and *Polyphemus* Moth.

Following up the subject of Clothing, cotton and linen claim attention. These are made from plant fibers. Some boy who likes to ask "smart" questions will want to know if cloth can be made from mineral fibre. Answer him by showing him a piece of sheet asbestos such as his mother possibly uses in the kitchen.

But can we not get a very interesting collection showing flax and its products or cotton and its products? Try growing some flax next summer. Press and mount some of the plants when in flower. Let others mature their seed if they will. Get some old lady to show you and tell you how in her young days the flax was manufactured into cloth. From the flax you grow, get as many stages of the process as you can. Find out and collect material made from flax seed. In November, I hinted at a fairy story a teacher might construct relative to the iron used in making a steel pen meet its brother iron that was used to make the ink. Can you not use a similar story about two neighboring flax plants, or, even, two parts of the same plant, which, after many wanderings, met when the house-wife brightened her furniture by using an old linen rag to rub on a little linseed oil? In story form the common origin of the rag and the oil sets the child's mind to thinking how closely, after all, so many of our common objects are related; and how far we have carried them from their natural condition. Then it is that human industry becomes a living reality. Words in a text-book are lifeless, and often meaningless; but the real material collection is living evidence of intelligent effort.

Cotton and its products will give another somewhat extensive collection.

But while we are talking about vegetable fibres, there are others beside those used for making clothing. A collection of coarser fibers, therefore, such as Manila hemp, Mexican, Russian, Italian and other kinds of hemp should belong to our school collection. With these should be samples of rope, twine, burlap, matting, brushes and other things made from these fibers. Pictures of the plants producing the fibers can be obtained. Children will be interested to learn that stems of some plants, leaves of others, fruits of others and seeds of others all contribute to their comfort.

Instead of mechanically reciting from the

geography text-book the products of foreign countries, without any reference to their use, would it not be wiser to teach the geography of our clothing and our furniture by beginning with the article as we know it; and then, by means of our school collections, work back to the raw products and to the countries producing them?

Teachers of neighboring districts could combine when collecting material. One could beg from sea captains; another from friends in other countries; another through correspondence with unknown friends who would gladly exchange for some product of our own maritime provinces. Merchants would often help. If a dozen teachers each gathered material illustrating one industry; and then divided all their material equally, each of a dozen schools would have a dozen industries represented.

If any teacher has already done this kind of work, her experience would be worth reporting to the REVIEW. It would help others.

I have found operators of our provincial industries very courteous in their willingness to supply anything they can.

QUESTION.

A teacher asks, "Can cocoons be found in the winter? If so, where?"

Yes, cocoons can now be found. Though one may not find them the first time one searches, it is not wise to give up. Look on branches of alder, birch or apple for cocoons of the cecropia moth. It is our largest moth. For other cocoons, look in crevices of bark, on old fences, on rafters of sheds, in fact, in almost any sheltered place.

Writing Words from Memory.

A lesson having been assigned to the class and studied, when the time for recitation comes request one or more pupils to go the blackboard and write, from memory, four or five words of the lesson. After the first pupils take their seats, send others to the board to write such words of the lesson as have not been written by the first pupils. Continue in this way until the whole lesson has been written, or the time for this part of the exercise has been all taken up. If any words are misspelled, correct them at once.—*Western School Journal*.

HINTS FOR JANUARY AND FEBRUARY.

The month that we are in may be taken in one way or another as a point of departure for lessons in different subjects.

For the little ones, the names offer a lesson in spelling and pronunciation. Teach them the contractions, and how to write New Year's Day, St. Valentine's Day, properly. The word February is very commonly mispronounced. Divide it into syllables, and see that the second syllable has its "r" sounded.

For number work use the calendar. How many days in the month? How many school days? Saturdays? Sundays? Read the date of the year. What does it mean? Write it in words. 1915 years since what?

Here we get into history, and older children will be interested in different ways of reckoning dates before the birth of Christ; *e. g.* the Romans reckoned time from the founding of Rome. Compare our abbreviations A. D., B. C., and A. U. C. (Anno Urbis Condita=the year of the founding of the city.) A recent writer says that there is only one date—now; and that the interest in all history is the finding out how things and people came to be as they are now. Where did the months get their names? Janus, a god of the Romans, was the god of gates and doors, and so of openings and beginnings. The first day of the month, and the first month of the year were sacred to him. He is represented with two faces, looking opposite ways.

Janus am I, oldest of potentates,
Forward I look, and backward, and below
I count, as god of avenues and gates,
The years that through my portals come and go
— *Longfellow*.

The word February comes from a word that means purification, because the Roman day of purification from sin came in this month. The second of February, commonly called Candlemas Day, is a Christian festival, commemorating the events recorded in St. Luke ii 22-38. The popular name keeps in memory an ancient custom of walking in procession with candles, and singing hymns.

Has the seasons of the year ever affected historical events? *e. g.*, Napoleon's retreat from Moscow in 1814; Queen Matilda's escape from Oxford over the snow. Any in Canadian history?

In geography such questions will come up as:—

Is January a winter month everywhere? What countries within the Empire have no snow? What differences do frost and snow make in trade, transportation, etc.?

Nature study need only be mentioned. Abundant help for seasonal studies has already been given in the REVIEW. But do not neglect to cultivate the sense of beauty in winter. Direct attention to colour,—the contrast of sky and snow.

"Around the glistening wonder bent,
The blue walls of the firmament;"

of snow and evergreens, "the sombre green of hemlocks turned to pitchy black against the whiteness;" the shadows on the snow; beauty of form, in snow crystals, in bare branches against the sky, tracks in the snow, forms of ice, frost on window panes. Notice the distinctive sounds of mid-winter. How many can be named? Discuss "the streets were *dumb* with snow." Link your study of literature closely with observation of the world about you, and you will find new beauty in both.

For reading take Emerson's "Snowstorm," Whittier's "Snowbound," the winter scenes in Lowell's "Vision of Sir Launfal," Longfellow's "Snowflakes;" from Hiawatha, the pictures of Peboan, the Winter, in sections 19 and 21; the description of the snowstorm in Lorna Doone, Chapters 41, 42, 43; the first stanza of Keats' "Eve of St. Agnes;" the description of skating in Wordsworth's "Prelude," Book 1, beginning, "And in the frosty season;" and from Cowper's "Task," passages from "The Winter Evening," "O Winter, ruler of the inverted year," "Fast falls a fleecy shower."

A careful study might be made of the January verses in Longfellow's "Poet's Calendar," beginning with the imagery and mythological references in the verse already quoted, and going on to the succession of pictures in the following:

"I block the roads and drift the fields with snow;
I chase the wild-fowl from the frozen fen;
My frosts congeal the rivers in their flow,
My fires light up the hearths and hearts of men."

some of these suggestions may be used in the opening exercises when the children are fresh from out of doors. The younger ones will enjoy Stevenson's "Winter-Time."

Late lies the wintry sun a-bed,
A frosty, fiery sleepy-head;
Blinks but an hour or two, and then,
A blood-red orange, sets again.

Before the stars have left the skies,
At morning in the dark I rise;
And shivering in my nakedness,
By the cold candle, bathe and dress.

Close by the jolly fire I sit
To warm my frozen bones a bit,
Or with a rein-deer sled explore
The colder countries round the door.

When to go out my nurse doth wrap
Me in my comforter and cap;
The cold wind burns my face and blows
Its frosty pepper up my nose.

Black are my steps on silver sod;
Thick blows my frosty breath abroad,
And tree and house, and hill and lake,
Are frosted like a wedding-cake.

Let them tell what the little boy saw and felt, and compare their own experiences, telling the likenesses and the differences. Are there any "colder countries" in the country schoolhouse? Was the country where this little boy lived as cold as ours? Was there snow on the ground?

BIBLE READINGS FOR OPENING EXERCISES.

1. Job XXXVII, 5-13.
2. St. Mark II, 29-39.
3. St. John X, 1-11.
4. Proverbs VIII, 10-21.
5. Psalm CXLVII, 1-11.
6. Deuteronomy VII, 9-13.
7. St. Mark II, 40-45.
8. Psalm CXLVII, 11-20.
9. St. John VII, 14-18.
10. Isaiah LXI, 7-11.
11. St. James II, 6-13.
12. Psalm CXLVIII.
13. Acts IX, 36-42.
14. Psalm C.
15. St. Mark III, 7-19.
16. Colossians III, 12-17.
17. I Kings IX, 1-7.
18. St. Mark III, 31-35.
19. Psalm CXLVI.
20. St. Mark IV, 35-41.
21. St. Mark VI, 35-44.
22. I John III, 18-24.

TEACHERS' INSTITUTE.

The joint meeting of the teachers of Carleton and Victoria Counties at Woodstock on December 17th and 18th was marked by the excellence of the lessons given and the papers read by the teachers themselves. Prominent among these were,—a lesson in Latin given by Miss Jennie King to pupils of Grade VIII. Miss King introduced the children, with much skill, to the uses of the ablative of means and the ablative of accompaniment, leading them to form their own rules for the proper translation of the English preposition "with"; a paper on the Teaching of History, read by Miss Bessie Fraser, who gave an inspiring account of her methods of relating history and geography, history and literature, and of presenting ideals of citizenship and patriotism; a paper on grammar by Miss Ruth Harper, and one on English composition by Miss Mildred Wallace. Good lessons were given in the Intermediate and Primary Sections on reading, nature study and other subjects. A paper on "Discipline" by Miss Lena Scott, read before the Intermediate Section, we hope to publish for our readers' benefit.

The hour spent in listening to Inspector O'Blenes' practical talk on Arithmetic, with illustrations of his methods of teaching, was felt to be well repaid. Primary teachers especially, must have profited by this instruction.

After listening to Mr. A. D. Jonah's excellent paper on Nature Study on Friday morning the teachers visited the Vocational School, where they were received by Miss Marvin and shown some of the work done in the Domestic Science and Manual Training Departments.

The evening meeting in the Assembly Hall of the Fisher Memorial School was addressed by Judge Carleton, Hon. J. K. Flemming, and Inspector Dixon, and Mrs. F. C. Squires and others sang. The Woodstock teachers served refreshments.

Discussions on the different papers and lessons were taken part in by Inspector Dixon, Mr. F. C. Squires, Miss Neales, Miss Robinson, Editor of the REVIEW, and others. Mr. Squires made an excellent presiding officer, and his speeches were exceptionally inspiring and instructive.

The attendance was about one hundred and twenty. The next meeting is to be held at Grand Falls. Officers for the ensuing year were elected as follows:—President, F. C. Squires; Vice-President, Miss Bessie Fraser; Secretary-Treasurer,

Walter S. Daley; Assistant Secretary, Mrs. Carvell; Additional Members of Executive, Miss Mildred Wallace, Mr. A. D. Jonah, Mr. Dow White.

At the closing meeting, it was unanimously voted that \$20.00 out of the Institute funds should be contributed to the Belgian Relief Fund.

A Y. M. C. A. HIGH SCHOOL.

The Y. M. C. A. in St. John has fallen into line with other branches of the association in many of the large cities in Canada and the States by opening a night school for employed boys.

School in the strict sense of the word is hardly the right term in this case, although this institution of learning resembles the famous Dotheboys Hall, in so far as each pupil receives a practical training, or as Squeers put it, "First he learns a thing, and then he goes and does it."

The idea was to give boys who have left school in the primary grades, and there are many of them, a chance to fit themselves for better positions than they now hold. To this end certain requirements of the public school, to wit, Latin, algebra, botany and the like are omitted from the curriculum and Reading, 'Ritin and 'Rithmitic, are administered in their stead. It is pitiful to see how sadly deficient even the boys who have left some of the advanced grades are in these branches of learning.

Two boys who had gone to the eighth grade and could gaily follow a Latin verb through all its twists and turns, or vivisection an English sentence to a nicety could not even add a column of figures with anything like rapidity and accuracy, and their writing leaves much to be desired in the way of legibility.

Geography plays a prominent part in the work, but it is reduced to a very practical basis, the war being a subject which holds the boys' interest and impresses areas, distance, populations and locations on their minds.

History is compounded in sugared pills and takes the form of fifteen minute talks by the teacher. While for reading, spelling and dictation the editorial columns of the daily papers make an excellent substitute for the sad tale of "Jane's Bird" and other prosy anecdotes which darkened our childhood.

The class has now been formed for about two months, and so far has proved a great success. —Contributed.

"HANDS ACROSS THE SEAS" 1914.

When the news of the safe arrival of our Canadian soldiers at Plymouth reached us the other day, it brought vividly to mind that sunny July afternoon, when we of that other "Overseas" contingent sailed gaily into Plymouth Sound.

Though war clouds had not then lowered, and ours was a mission of peace and pleasure, still it was a movement prompted by that spirit of imperialism, which has quickened our soldiers into action.

The Hon. Organizer, Mr. F. J. Ney, and the Hon. Chaplain, Dr. Crummy, were realizing a dream of Empire building, when together as definer and promoter they had worked out the "Hands Across The Seas" movement. This movement has made it possible for the rank and file of our teachers to visit the Mother Country under the happiest conditions, and to come in contact with those institutions and traditions that have made England great. Thus with a loyalty deepened and broadened, the teachers ought to become a greater inspiration to the youth of Overseas Dominions.

Of those first days of our pilgrimage one feels tempted to give a very minute account. From the tender that came out to meet us floated the strains of "The Maple Leaf Forever," and many and oft were the times it was played in our honour before we sailed for Canada. Our Newfoundland and New Zealand friends were not honoured in this way, and must have longed for their native airs.

As we passed two cruisers in the Sound our band struck up the National Anthem. Little did we then think that cruisers would be doing patrol duty for us on our return voyage, or that two would be sunk by the enemy on our very day of sailing.

Those days in "Glorious Devon!"—The Purser of "The Grampian" had said we would take Devon by storm, but in fact it was the other way about, and the invaders became the captives.

As we rode up from Plymouth to Torquay, our eyes, like the Kaiser's, became phosphorescent with happiness. The roses, the hedge-rows, the quaint stone houses, the vivid green of the cultivated fields, contrasting with the rich terra cotta of the newly ploughed, made a series of

moving pictures that will long delight our inward eye.

Torquay, the Italy of England, with its sub-tropical beauty, its geological interest and its hospitable people must have more than a passing notice. The garden party at Torre Abbey, the fine old seat of the Carys, was not the least of the many attractions arranged for our entertainment. Here we had our first entrance into one of the "Stately Homes of England." Colonel Cary had been in Canada with his regiment in 1861, and cherished a fond memory of Canadian kindness and hospitality.

In the beautiful dining room of the Abbey, once the Abbot's apartments, our attention was called to a full length portrait of the Colonel's only son, who lost his life during the Boer war, aged twenty-nine. In England one realizes the price of Empire.

A sail to Brixham, where William of Orange landed in 1681, was another feature of the Torquay programme. Here our overseas party landed in 1914, and had an official welcome from the chairman and the members of the district council, the school children being given a half holiday to mark the event, and to leave their teachers free to entertain their visitors.

It was while labouring at Brixham that the Rev. H. F. Lyte wrote his beautiful hymn, "Abide with Me." We visited his former home and were shown the original manuscript. Then in chorus we sang this hymn, that has been a solace to so many wayfarers.

From Torquay to Exeter, that ancient and loyal city, we travelled next. As in the play of "Richard III" the Mayor in courtesy showed us Rougemont, or what is left of it, entertaining us at a garden party in its beautiful grounds. The town clerk gave us a most interesting lecture on the historic Guild Hall, where we were also entertained. The Rev. Dean ciceroned us through the beautiful Cathedral, built in the 13th century, with its twin towers, built by the nephew of William the Norman, at a still more remote time. Exeter vibrates with history, and no one could be more conversant with it than the town clerk, who gave us so generously of his time and knowledge.

We had the privilege of visiting schools, here, which we also had at Oxford.

At one of the elementary schools, a girls'

school, scenes from "Joan of Arc" and "Midsummer Night's Dream" were given by the pupils in our honour. Though the children were of the poorer class, and though there was the simplest of stage setting, they entered with such a spirit of appreciation into the plays, and recited their parts with such perfect enunciation and purity of tone, that we were all charmed. Their dancing and singing were a delight both to themselves and onlookers. The manual work at this school was also excellent.

We asked a little girl, who bent over her needle work with a funny little brown eared cap on her head, what her part in the play was to be. She rose to her feet, and said in the demurest of tones, "Puck, Miss,"

Farewell to Devonshire, with its cream, its mariners, and all its fair scenes.

Oxford looms up and begs more than a passing word.

In the dingy little alley off "The High," known as "The Turl," lodged sixteen as happy "hands" as there were in the whole party.

Three colleges, Exeter, Jesus and Lincoln, were within almost arm's length, grim looking colleges, with their beauty hidden from the public eye. Exeter's William Morris tapestries were so jealously guarded from the ravages of suffragettes, that not even the Ney Party could gain admission, lest haply, a suffragette might appear in the guise of an overseas teacher.

Christ Church, Magdalen, University, Trinity, New College, St. John's, other colleges and the Bodleian Library opened their hospitable doors.

To tell of their "quads," their gardens, their walks, their meadows, and the treasures of the Bodleian, space does not allow.

Our guides were ladies and gentlemen of Oxford, members of the Victoria League, who spared no pains to make our visit at Oxford a memorable one.

The Mayor of Oxford received us at Christ Church, where we were both lunched and "teaed" in the beautiful banqueting hall. The warm words of welcome were ably responded to by Dr. Crummy and others.

The afternoon light, through the richly coloured windows of that beautiful hall, where portraits of distinguished Oxonians eyed us from every side, leaves another treasure picture on

that inward eye, which is the "bliss of solitude."

All roads in Britain lead to London, and there we found ourselves one July noon. Goldwin Smith has called it "the sitting room of the Empire," and it is astonishing how soon one begins to feel at home there.

To be in London at any time is quickening, but to be there, when the world's greatest war was declared, intensified the interest. Flushed with nationality, to use a borrowed expression, we hurried one night to St. James Park, there to join the crowd, cheering and singing the National Anthem. An hour and a half spent in this patriotic company, and we were rewarded for our patience. The King and Queen and Prince of Wales appeared on the balcony; graciously acknowledging the people's expressions of loyalty in an hour of national crisis.

Upon the news that war was declared eight nurses, members of our party, sent in their names to the War Office, volunteering for service.

In the Abbey at a parade service of the Queen's Westminister Rifles, soon to go to the front, (though like Pepys at the coronation of Charles II it was our great grief that we could not see the High Altar) we were deeply impressed with what the war would mean to those men. The sermon was preached by the Ven. Archdeacon Wilberforce, and never did the benediction seem to be more impressively pronounced. Then reverently the long line filed out from the sacred place to most solemn music. Our realization of the gravity of the situation was intensified at St. Paul's Cathedral in the evening, when the Bishop of London preached to 10,000 people, from the text, "The cup, that My Father hath given me, shall I not drink," and the vast congregation sang, "Oh God, our help in ages past."

Of the reception given at the Hotel Metropole by the Colonial Institute, the Earl and Countess Grey receiving the guests, one must speak but briefly. War had not then been declared, but the speeches were of a most patriotic character, as on all similar occasions. Earl Grey congratulated Mr. Ney on his part in the work of Empire building. It was on this occasion that Dr. George R. Parkin electrified his hearers with all his old-time power.

Days out of London at Kew, at the Royal

Caledonian School, Bushy, at Harrow, Windsor and Eton, Aldershot, Portsmouth and the Dukeries, were full of interest. Those great lorries in which we were trundled through Aldershot, with the men who operated them, now know what active service is. On that day at Portsmouth when the fleet was mobilizing for the North Sea we witnessed many a sailor returning to the dock-yards, called in for his country's defence.

Stratford, with its sight-seeing, its theatre-going, its Educational Conference and its School of Morris Dances and Folk-Song would fill many a page.

The Conference itself, which met in the old Grammar School of Shakespear's day, was enough to engross one.

A morning session, which many of our party attended, was presided over by Professor Trench of Dublin University, and teachers from all over Great Britain were present. A paper on "Training in the Appreciation of Poetry," read by a lady of rare culture, was followed by a most animated discussion. The discussion brought out a great difference of opinion, as to whether or not Robert Louis Stevenson's poetry was appreciated by children; also as to the value of paraphrasing in the teaching of literature.

A lady with a very Scotch accent denounced paraphrasing by the pupils with great vehemence.

One felt tempted to rise and give as an argument in its favour, a pupil's interpretation of the passage,

"Kind hearts are more than coronets,
And simple faith than Norman blood."

The pupil's words were to this effect, that it was better to be kind than play in the band, and to have simple faith than kill a lot of Normans. That pupil, it is quite evident, had not had paraphrasing enough. The point of difference seemed to be in the understanding of the word paraphrase. Our Scotch friend must have had a metrical version in her mind. Surely no one could object to a pupil's expressing a passage in other words to show that the meaning was understood. We saw this point nicely illustrated in a lesson given on Wordsworth's "Daffodils" in a literature class at Oxford. The teacher read, and the pupils interpreted in their own words as the teacher asked for the meaning.

As for children enjoying Robert Louis Stevenson's poetry—one teacher seemed to put her finger on the place, when she said that children like Stevenson's poetry because it lends a glamour to common experiences. Another teacher gave a pupil's rather wise comparison between Tennyson and Browning. "Tennyson," she said, "thought things would come out all right, Browning knew they would."

In the churchyard of Holy Trinity (the church of Shakespeare's christening, marriage and burial) one may still sit on the stone seat overlooking the Avon, where Longfellow sat in 1865; but whether an Ode to the Avon will be the outcome is another thing.

A walk across the fields to Shottery at "high noon" brought us to Ann Hatheway's cottage. There it was, with its thatched roof, sunning itself in the old garden as it did over three hundred years ago, when Shakespeare was young.

Goodbye to Country and Morris dances on the green of the beautiful Memorial Theatre, and to all that made Stratford so fair. The English Lake District, with its hospitable mountains and shores and all that endeared it to the poet Wordsworth awaits us next.

The sail on Lake Windermere, the climb up Wansfell Pike, picking heather on its summit, the ride to Keswick, passing Grasmere, where we visited the poet's grave, the Helvellyn range, and Thirlmere are all visions of loveliness to be called up, when the actual horizon is dull and narrow.

Entraining at Keswick it was not long till we found ourselves "ayont the Tweed," where the pawky wit is found.

At Melrose in the gray light of the early evening we first set foot in Scotland. The gray Abbey, built in the dim ages of David I of Scotland, and receiving many a blow from English invaders, still stands in the beauty of decay, a mute witness to the "elder days of art" and religion.

Then came Edinburgh, the ancient northern capital, its great castle looming up in the murky atmosphere, and frowning down on the town, like a huge personality that will not be ignored. We covered what is known as its "historic mile." Passing Salisbury Grag, and Arthur's Seat, and alighting at Holyrood Palace, we entered the oldest part, sacred to the memory of Mary

Queen of Scots. Among the many relics was the Oratory in the Queen's Audience Chamber where, the guide told us in his own vernacular, she married her third "maun" very early in the morning. The High Street with its "lands," once the home of the great, now, as there is striking evidence, of the "great unwashed." The narrow "closes" running in between the "lands," looking as if they did not lead to paths of virtue, and John Knox's house were all neighbours. Then came world-famed Princes Street, with its gardens, its statues, its shops. We had little time to study this city of such striking contrasts.

Of Scotland generally we have recollections of ripened grain fields with poppies raising their impertinent heads, grim stone walls or dykes, not the hedge-rows of England, rowan trees and castles and ruins. The trip up Loch Lomond from Balloch Pier to Ardlui brought us into the home of Scottish songs and romance. Ayr and "Bonnie Doon," a run back to Glasgow, and our steamer is boarded.

Three things marked our trip home; a farewell dinner on the eve of sailing, in honour of Mr. Ney, whom we were to leave behind us; "A call to Prayer," on our first Sunday out; and the work for the Red Cross Society. The order of service of the Call to Prayer was most fittingly arranged by Rev. A. J. W. Crosse, Vicar of St. Cuthbert's, Carlisle, and Mr. F. J. Ney. Service at sea at any time is most impressive, but in time of war it seemed doubly so. To be idle on the return trip was to be ashamed. The result was that forty shirts and twenty-eight pairs of stockings were sent back by the Scandinavian for the soldiers.

Now that our beautiful summer is seen in perspective we cannot express too warmly our gratitude to the Hon. Organizer and his associates, for all that was done to make our official visit to the old land one of the greatest profit and pleasure.

CANDLEMAS DAY,

(February 2.)

If Candlemas Day be cold and clear,
The worst of the winter is yet to appear.

If February brings the rain,
'Tis neither good for grass nor grain.

THE RED CROSS.

We have received from the Central Committee of the Canadian Red Cross Society a little pamphlet, setting forth reasons why the society should be supported, with a request to publish in whole or in part, the information thus supplied, for the benefit of the Canadian Overseas Contingent.

We gladly accede to this request, and believing that many people who freely give time and money to the Red Cross are yet not very definitely informed about the beginnings and working of this famous organization, we preface our extracts from the society's booklet by a very brief outline of its history, most of the facts in which are gathered from a full and interesting article by Henry C. Shelley in the "Edinburgh Review."

"The true and only begetter," says this writer, "of the Red Cross Movement was a Swiss philanthropist, Henry Dunant." An accidental experience at the battle of Solferino, 1859, so deeply impressed M. Dunant with the need of organized help for wounded soldiers, that he never rested until by writing, speaking, and interesting already existing organizations, he succeeded in bringing about an international conference to deliberate on the matter. This conference met at Geneva, in September 1863, with thirty-six delegates representing fourteen governments, and led to the famous Geneva Convention of 1864, to which we may look back as the real beginning of the Red Cross Societies. The convention laid down, among other principles, that all hospitals and ambulances were to be regarded as neutral and to be protected and respected by combatants; and that wounded and sick soldiers should be entertained and taken care of, to whatever nation they may belong.

The conference of 1863 had already decided upon the adoption of an identical, distinctive sign for the medical corps and an identical flag for the field and stationary hospitals of all armies. The sign thus adopted was the Red Cross, chosen as a compliment to the Swiss originators of this beneficent conference, for the Red Cross on a white ground is simply the flag of Switzerland with the colours reversed. In the convention of 1906, it was expressly declared that this sign has "no religious significance." Turkey, however, claimed the right to substitute a Red Crescent for the Red Cross.

Prussia, Austria and Denmark established National Red Cross Committees in 1864. In England there was some confusion of societies. In 1870, at the beginning of the Franco Prussian war, there was founded "The National Society for aid to the sick and wounded in war," and in 1898, a kindred organization called "The Central British Red Cross Council" was officially recognized by the war office. These two societies in 1905 joined forces under the name of "The British Red Cross Society."

The Geneva Convention of 1864 has been superseded by the Geneva Convention of 1906, when the principles laid down by the earlier convention were somewhat altered in the light of experience. The conference of 1906 was attended by seventy-seven delegates, representing thirty-seven governments. The position of voluntary aid societies was defined and legalized. It was agreed that each state should notify to the other the name of the authorized society which is to render assistance to the regular medical service. And as the Red Cross has been agreed upon as the name and distinctive sign of such an authorized society, it will be seen that all relief work for the sick or wounded in war must pass into the Red Cross category instead of working independently.

The position and objects of the Canadian Red Cross Society are officially stated as follows:

"The Canadian Red Cross Society was first established in the year 1896, and acted throughout the Boer War. It was subsequently incorporated in the year 1909 by an Act of the Dominion Parliament.

"The British Red Cross Society, acting under a Charter given by His Majesty, King Edward the Seventh, is the parent society, and represents the British nation under the International Treaties of Geneva. The Canadian Red Cross Society is in affiliation with it.

"The principal aims and objects of the Society are to collect funds and material and to provide assistance to the sick and wounded in time of war, supplementary to that furnished by the Official Naval and Medical Departments."

We quote now from the appeal of the Central Committee:

Basing our probable casualties on the statistics of former modern wars, there will probably be in this greatest of all wars, 140,000 men killed

and wounded. Allowing 20 per cent, the average disability in war, as an average number of sick, it would mean that we shall have 400,000 sick in the armies in Europe. This is a modest estimate. With the Canadian Contingents there are hospitals and ambulances containing 2,090 beds. These hospitals are equipped by the government, but in addition to the official and regular supplies the Canadian Red Cross Society is supplying large additions of reserve and supplementary stores. These stores are under the direct control of the officers commanding the Canadian Hospitals. It will be necessary for the society to supplement these stores from time to time as occasion offers. Since the beginning of the war the Canadian Society has already (September 1914) remitted to the Central British Red Cross Society, in London, the sum of £10,000 for the general use of the sick and wounded.

"Our object in doing this is to bring as quickly as possible, through the agency of the parent Society, which is near the front, aid to the unfortunates of the armies and to avoid the necessary delay in the transport of stores from this country. It seemed to the Committee the most effectual way of giving immediate aid.

"It has been previously stated that 50,000 Canadian troops are being sent to Europe to take part in the great war. It is our duty as well as our privilege to provide for the sick and wounded of this contingent all comforts which may be possible, either directly through our own Society or indirectly through the British Red Cross Society. To accomplish this we must have first, MONEY, with which to purchase the necessary articles which cannot be made at home, to contribute cash to wounded and sick soldiers, and to pay the running expenses. Therefore, give as your heart dictates. The widow's mite and the millionaire's cheque are equally welcome, and will be faithfully applied.

"Money and goods should be sent to the Treasurer, Canadian Red Cross Central Committee, 77 King Street East, Toronto, or to the local committees of your district."

All the air was flat with snow,
All the air was thick with snow;
More than this no man could see,
For all the world was snowing.

WHO, WHAT AND WHERE.

NO. IV.

FRIENDS AND FRIENDSHIP.

1. What two friends were pardoned by a tyrant because of their devotion to each other?
2. Who explained that the telling of unpleasant truths was a mark of true friendship?
3. Who had no friends because she was a favourite?
4. Who said of or to whom—?
 - (a). A friend should bear his friend's infirmities.
 - (b). Thy love to me was wonderful.
 - (c). He makes no friend who never made a foe.
 - (d). Meantime, how much I loved him,
I find out now I've lost him.
5. Where do we find the following mention of some of the joys of friendship:
 - (a).—how often you and I
Had tired the sun with talking and sent it down the sky.
 - (b).—each by turns was guide to each
And Fancy light from Fancy caught.
 - (c).—bright hours together told,
And blissful dreams in secret shared,
And thoughts of good together done?

ANSWERS TO DECEMBER QUESTIONS.

1. William the Conqueror was crowned on Christmas Day, 1066.
2. Good King Wenceslas ministered to the poor "on the feast of Stephen" (December 26th).—*Old Carol*.
3. Caspar, Melchior, Balthasar.
4. Dickens.—Mrs. Fezziwig.—*A Christmas Carol*. Thackeray.—Prince Bulbo.—*The Rose and the Ring*. Dickens.—The Tetterbys.—*The Haunted Man*. Kate Douglas Wiggin.—Sarah Maud Ruggles.—*The Birds' Christmas Carol*. Clement Moore.—Prancer and Dancer.—*A Visit from St. Nicholas*.
5. (a). Hamlet I.—Some say that ever 'gainst that season comes
Wherein our Saviour's birth is celebrated
The bird of dawning singeth all night long.
- (b). Milton.—But peaceful was the night
Wherein the Prince of light
His reign of peace upon the earth began.
—*Hymn on the Morning of Christ's Nativity*.
- (c). Heap on more wood, the wind is chill,
But let it whistle as it will,
We'll keep our Christmas merry still.
—*Marmion, Introduction to Canto VI*.
- (d). Again at Christmas did we weave
The holly round the Christmas hearth.
—*In Memoriam, 75*.
6. The Treaty of Ghent, December 24th, 1814, concluding the war of 1812.

COMMENTS ON DECEMBER ANSWERS.

The Christmas holidays brought the best set of answers we have had yet. Were the questions easier, or did people have more time? Two new contestants, Peggotty and Zaire, have gallantly come into the field. M. V. L. and Jill get perfect marks. We are glad that Prince Bulbo is a familiar friend.

An error crept into the comments on November answers. It was No. 6, on Wordsworth's sonnet, that was not attempted. More than one correct quotation from Longfellow's "To the River Charles," came in answer to No. 5. Marks for December—20 allowed. M. V. L., 20; Jill, 20; Peggotty, 17; M. L. L. Club, 17; Zaire, 18; Morleena Kenwigs, 15.

THE SNOWFLAKES.

It was a little snowflake,
With tiny winglets furled,
Its warm cloud mother held it,
Above the sleeping world;
All night the wild wind blustered,
And blew o'er land and sea;
That little snowflake cuddled close
As safe as safe could be.

Then in the cold gray morning,
The great cloud-mother said,
"Now every little snowflake,
Must proudly lift its head,
And thro' the air go sailing,
To find a place to light,
For I must weave a coverlet,
To clothe the world in white."

The little snowflake fluttered,
And gave a wee, wee sigh,
But fifty million other flakes,
Came softly floating by;
The wise cloud-mothers sent them
To keep plant babies warm,
Through many a winter sunset,
Through many a night of storm.

—MARGARET SANGSTER

RHYMES FOR CALENDARS.

January brings the snow,
Makes our feet and fingers glow.

February brings the rain,
Thaws the frozen lake again.

Full knee deep lies the winter snow,

Ah, bitter chill it was
The owl, for all his feathers, was a-cold.

O ye Ice and Snow, bless ye the Lord.

TELLING THE TIME.

"Tick, tock, tick, tock," says the big clock,
 Tick, tock, tick, tock, almost eight,
 Hurry, children, get your school books,
 Hurry now, and don't be late.

"Tick, tock, tick, tock," says the big clock,
 Tick, tock, tick, tock, almost three;
 Put your books away, my children,
 Run off home right merrily.

"Here is where my geometry can be put to practical use," said Miss Russell, as she deftly drew a circle sixteen inches in diameter on a piece of white bristol board, by means of a pencil "stub" and a piece of cord.

Upon the circle, in very faint dotted lines, she drew the diameters (vertical and horizontal). About half an inch inside the circle, she drew another circle. At the top of the vertical diameter, with a brush dipped in ink, she made the Roman numeral XII, at the lower end, the VI; at the left end of the horizontal diameter the IX, and at the right end the III.

Dividing the four right angles into three equal parts, she painted on the rest of the numerals, I, II, IV, V, VII, VIII, X, and XI.

The space between the numbers all around the dial was divided on the circle margin, into five equal parts (thus making the minute divisions.)

A long hand and a short hand, cut from card-board and inked black, were secured to the middle of the dial by means of a metal fastener, and now the clock face was ready, and the hands easily turned this way and that.

Miss Russell took it to school and hung it by a cord from the top of the blackboard, within easy reach of the children.

She taught them the Roman numerals, and the meaning of the minute spaces — what "half" and "quarter" meant, and illustrated it all on the big dial. She taught them to count by fives, and how to move the short hour hand and the long minute hand.

Of course, this took time, but the training in number work was good, and after a while when the children understood about it, as a little recreation and exercise, Miss Russell would call up one of the little pupils, whisper to him to make the clock say a "quarter after ten," whereupon he would go to the dial, turn the hands to the proper place and call upon one of his schoolmates to "tell the time," and this one, if he told it correctly, as a reward, was permitted

to set the clock at some hour, and call upon others to "tell the time."

This is a good and practical exercise, and can be worked out with good results even in the first grade.—*Primary Education*.

DRILL IN MULTIPLICATION.

I have found it advantageous to substitute for drill in the multiplication tables a series of problems. These problems can be prepared rapidly and in great numbers in the following way. The method also has the advantage of giving complete drill in all the combinations.

The selection of the multiplier is dictated by the steps previously developed. Two's and three's having been developed, the multiplier may be 2, or 3, or, if two-place multiplying be known, 23. Four's having been developed, and multiplication by three places known, the multiplier can be 234, or 432, or 423, or 324. A multiplicand is then selected as follows: 369—. Successively around the school I give out to replace the dash the figures 1, 2, 3, 4, etc., up to 9. The first child's multiplicand, then will read 3691; the second child's 3692; the third child's, 3693, etc., a condition that alters the result of each child's example and so puts each child on his own resources. His neighbor cannot help him and he finds the necessity of doing his own work.

Quickly working the first example, I add the multiplier to the product and get the answer to the second example. Adding the multiplier to that answer gives the answer to the third example, and so on.

This is the device partially worked out:

3691	
432	
7382	
11073	
14764	
1594512	First child's answer.
432	
1594944	Second child's answer.
432	
1595376	Third child's answer, and so on.

The facility with which each child can be given a separate example and be immediately examined is the feature that recommends the device for at least examination.—*Western School Journal*.

THE CAT'S TEA PARTY.

(1) Five little pussy-cats, invited out to tea,
Cried: "Mother, let us go. Oh, do! (2) for
good we'll surely be;
(3) We'll wear our bibs and hold (4) our things
as you have shown us how —
Spoons in right paws, cups as well, and (5) make
a pretty bow;
We'll always say, 'Yes, if you please,' and 'only
half of that.'"

"Then go, my darling children," said the happy
mother cat.

(6) The five little pussy-cats went out that night
to tea,

(7) Their heads were smooth and glossy, their
tails were swinging free;

They held their things as they had learned, and
tried to be polite;—

(8) With snowy bibs beneath their chins they
were a pretty sight.

But, alas, for manners beautiful, (9) and coats
as soft as silk!

The moment that the little kits were asked to
take some milk,

(10) They dropped their spoons, forgot to bow,
and — oh, what do you think?

They put their noses in the cups and all began
to drink!

Yes, every naughty little kit set up a miou for
more,

Then knocked the tea-cups over, (11) and
scampered through the door.

—F. E. Weatherley.

MOTIONS.

- (1) Stand erect. Hands by side.
- (2) Fold arms and look very imploringly.
- (3) Place pinafore, to imitate bibs, by raising the bottom and placing it around the neck.
- (4) Place fingers as if to lift a cup to the mouth.
- (5) Make a bow.
- (6) Let children take hold of hands as if to go out.
- (7) Smooth hair.
- (8) Point to chin.
- (9) Point to coats or pinafore.
- (10) Look very sorrowful.
- (11) Raise hands and throw them both forward towards the door.

No school or college discipline can be perfect; but school and college discipline become more nearly perfect according as the teachers possess, beside strong character, unquestioned sympathy with young people, and unquestioned integrity. When I say, "unquestioned." I imply tact, courtesy, and possibly humour; for without at least the first of these qualities no sympathy can be unquestioned, and without the others some sympathy misses fire. Tact, courtesy, and

a sense of humour are in most of us intermittent, and hence most of our failures. Men may be able, upright, and genuinely sympathetic, yet quite unable to make young people know their sympathy or even feel their uprightness, except on long acquaintance. Such men are, among young people, ineffective. A just teacher may be hated, and an unjust teacher loved, if the just man cannot show sympathy at short notice, and the unjust man cannot help showing it.

L. R. BRIGGS.

CURRENT EVENTS.

With incessant fighting in France and Flanders during the last month, there has been little change in the situation. The Allies have assumed the offensive all along the line from Switzerland to the North Sea, and are trying to dislodge the Germans from the positions which they have held since September. The most important successes are at the extreme ends of the line. The French have made some considerable advance in Alsace, and in Belgium the Allies are slowly moving onward towards Ostend. The first Canadians to be sent to the front are now with the British forces in Belgium.

Advance and retreat, with fierce fighting and appalling loss of life on both sides, are reported from the long battle-line in East Prussia, Poland and Galicia. The second German invasion of Poland began in November. Their chief object was to reach Warsaw, the capital of Poland; but their swift onset was checked at the swamps and streams which lie to the west of that city, and their forces divided by the Vistula, which is a broad winding stream like a Mississippi River running north. The Russians at present seem to be holding them in check at this part of the line, while they are again threatening to invade East Prussia, and have defeated the Austrians in Galicia. All the passes of the Carpathians are now said to be held by the Russians.

The most remarkable military event of the month was the rallying of the Serbs, who have recaptured Belgrade and driven all the Austrians out of their territory. It is rumoured that the Czechs (pronounced checks) and other Slavs in the Austrian armies refused to fight against the Serbs, and surrendered in thousands.

The Russians claim to have won a decisive victory over the Turks in the Caucasus. The British and French are preparing to attack Constantinople. Greece is ready to move an army against the Turks if they encroach upon her territory. The British Indian force on the Euphrates has taken possession of the river for one hundred miles from its mouth. Italy's occupation of Albanian territory may bring her into war with the Turks, and there are serious divisions among the Turks themselves. It seems not improbable that both Turkey-in-Europe and Turkey-in-Asia will soon disappear from the map.

The German fleet which sunk two British ships off the coast of Chile in November were met and sunk by a British fleet off the Falkland Islands on the eighth of December. There are now few German warships at large, and British commerce is comparatively safe in any part of the world.

On Christmas Day, British warships, submarines and

aeroplanes made an attack on the German naval base of Cuxhaven. This was in retaliation for a raid of German cruisers on the English coast earlier in the month; but neither of these raids would seem to have been of much military advantage.

The Mexicans are still fighting among themselves, and the outside world scarcely knows or cares which faction is victorious.

Under the new naturalization laws, a person naturalized in Canada acquires all the rights of a British subject, wherever he may go. Heretofore, Canadian naturalization has been recognized only in Canada. It will still be possible for a person to obtain the limited naturalization after a three years residence in Canada. The requirements for the broader naturalization are five years residence in the British Dominions, one year of which must be in Canada; good character; an intention to reside in His Majesty's Dominions, and an adequate knowledge of English or French. It will be seen that an alien who does not speak either English or French is not qualified for naturalization here; but if naturalized elsewhere in the British Dominions his citizenship will be recognized here.

The Argentine Republic claims the ownership of the Falkland Islands, and has just made its annual protest against the British occupation. The islands have little communication with the rest of the world, and are not a very valuable possession. There are about two thousand inhabitants, mostly Scotch shepherds, and wool is the only export.

The addition of less than one per cent of carbon transforms soft wrought iron into steel. Though this is a familiar fact, it is very wonderful; and a prize of £200 has been offered to promote a study of the subject in England and America.

English experimenters have discovered a method of producing steel directly from iron ore.

French engineers discovered, not long ago, in the north of their country, the largest and richest body of iron ore in Europe. This is in the part of France now held by the Germans; and it is said that to obtain these iron deposits was one of Germany's reasons for going to war. Whether Germany wins or loses, Belgium and the north of France will probably be in future the richest manufacturing district in Europe, with the possible exception of the rich country at the head of the Black Sea, where the armies of Russia and Turkey are now in conflict.

Iceland is still looking for a larger measure of self government, although it now has the same home rule that we have in Canada. At the last session of the althing, or local parliament, the constitution was amended; and the question is now raised as to whether this change requires the sanction of the Danish parliament. The king will summon some of the leading politicians of Iceland to confer with him, and see whether some satisfactory settlement can be arranged.

The well known steamship "Empress of India," which belonged to the Canadian Pacific Railway Company, has been sold to the Gaekwar of Baroda, to be used as a hospital ship for Indian troops.

As an outcome of the war, Great Britain has established a protectorate over Egypt. The suzerainty of Turkey is

thus terminated. The Khediv has been deposed, and his relative, Prince Hussein Kemal, has been appointed to succeed him with the title of Sultan.

Italy has occupied the Albanian port of Avlona, in consequence of a revolt against the Turkish ruler, Essad Pasha. It may be the beginning of a permanent occupation which will give to Italy full command of the entrance to the Adriatic.

British forces have occupied the largest of the Solomon Islands formerly held by the Germans; and have retaken Walfish Bay, a small British colony on the west coast of Africa, which had been taken by the Germans at the beginning of the war.

After the war between Russia and Japan, Russia was compelled to cede to Japan the southern half of the island of Saghalien, which had formerly belonged to the Japanese. By purchase Japan has now again become owner of the whole island. The price was paid not in money, but in big guns which Japan has placed at the service of Russia, and which have been transported across Siberia for use against Germany.

A Norwegian scientist, Dr. Hjort (yort), has been conducting an investigation in the Atlantic Provinces with a view to determining whether the new methods of herring fishing introduced by him in Norway can be successfully adopted in Canada. The new system is said to have produced a tenfold increase in the value of the Norwegian fisheries.

SCHOOL AND COLLEGE.

From the *Acadia Bulletin* we learn that Acadia hopes to have an Officer's Training Corps, 125 students having signed a petition to the Militia Department that such a corps should be organized.

The Emmerson Memorial Library Building has been completed, and handed over to Acadia University, and it is expected to have the Library ready for use at the beginning of the new year. The new Women's Residence is already occupied by forty-four students, there being accommodation for fifty.

The Board of School Trustees, of Fredericton, N. B., has decided to establish a Domestic Science Department in connection with the schools of that city. The Smythe Street School will be opened after the Christmas vacation, with Miss Emily Thompson of the Charlotte Street School, as principal.

Miss Edna Golding has resigned her position as teacher of the primary department of the Model School.

The Alumnae Reading Club of the St. John High School sent a Christmas box of toys to the Belgian minister in London, for distribution among Belgian children.

The children of the Chatham, N. B., schools have raised over \$300 by means of a concert. Of this sum, \$160 was sent to the treasurer of the New Brunswick Belgian Relief Fund, and the rest was contributed to the Chatham Patriotic Fund.

Mr. C. M. Lawson, of the St. John High School staff, has been appointed a lieutenant in the 26th regiment.

Sir William MacDonald has completed a large purchase of land on the slope of the Mountain adjoining Mount Royal

Park and will give the property to McGill University. A new campus and residential buildings will be established upon it. The purchase price was over \$1,000,000. Including the cost of MacDonald College and its endowment, this brings Sir William MacDonald's total gifts to McGill University to \$10,000,000.

The Governor General's Challenge Shield for cadet corps competitions has been won by the Winnipeg Highland Cadet Battalion.

Miss Margaret Grey, who has taught in the Winter Street School, St. John, for the past thirty years, has resigned. Her fellow teachers presented her with a substantial token of their esteem.

The teachers of the primary schools in Yarmouth, N. S., gave the children their annual treat of a Christmas tree before the schools closed for Christmas vacation.

The Ontario Education Department, believing that the present European war, its causes and the reasons for Britain's share in it, should be fully grasped by the school children of the province, has decided to incorporate the study of it in the curriculum of the present school year. It will appear as part of the history course in the grades where it will be understood easily, and questions on it will be given in the promotion examinations. In this connection the Government is sending to each school a copy of the British diplomatic despatches issued at Ottawa.

The circular issued suggests that generously disposed citizens as well as school boards shall under suitable conditions offer prizes for essays on one or more of the phases of the present struggle.

Mr. Harold H. McKiel, who had charge of the school at Greenwich Centre, Kings Co., N. B., recently enlisted for active service abroad, and is now with the Second Contingent at St. John. He attended Normal School last term and is but eighteen years of age. He is a son of Mr. W. W. McKiel, of Brown's Flat, and brother of Miss Nina E. McKiel, the teacher at Oak Point.

Following the example of Toronto, the schools of St. John are beginning to prepare scrap books of newspaper clippings to be sent to the Canadian soldiers in England at short intervals.

The total contribution of the teachers of St. John to the Red Cross Fund will amount to over \$900.

The report of the Halifax School for the Blind shows that during the past year 193 students have been in attendance. It is regrettable that the treasurer should have to report a deficit of over \$3,000. This Institution is worthy of the most generous support from the public.

We regret to record the death at Sackville, on December 24th, of Miss Laura Lathern, for twenty-one years teacher of English and Latin at the Ladies' College, Mount Allison.

BOOK NOTICES.

Causeeries en France, by E. E. Patton, is a very practical little book of French conversations, with clear and sensible grammatical notes, intended for travellers, and readers of modern French. It contains in addition, a useful and convenient hand-book, in the good binding and print that we expect from its publishers, D. C. Heath & Co., Boston. [187 pages. 70 cents].

The *Second Year Direct French Course*, by G. A. Roberts and H. J. Chaytor, consists mainly of a reader, with a great variety of questions and exercises on the reading matter, but has also about fifty pages of outlines of grammar, in French. The reading lessons give a good deal of interesting information about the life of a French school boy, and the many illustrations, especially those of scenes in Paris, add much to the value. [216 pages. University Tutorial Press, London].

The cover of *Stories of London* with the arms and motto of the city, at once attracts us, and the promise of the outside is fully kept by the contents. E. L. Hoskyn has told in a very entertaining way some of the many stories which reflect the life of London, and cling around its famous buildings and streets. They are told especially for London children, but all children of the Empire who hope (as who does not?), one day to visit London should know them. The book is beautifully illustrated in colour, and has a preface by Dr. Sophie Bryant. A charming book for teachers to read to children beginning to study English History. [63 pages. 1s. Adam and Charles Black, London, W.].

From the same firm we have a set of travel pictures which we heartily recommend to the consideration of geography teachers. Fifty pictures, half in black and white, the rest in colour, are fastened into a stout paper cover, so that they can be taken out for purposes of study. How they are to be studied so as to stimulate the imagination and impress facts, is directed in a series of problems and exercises. We have sets on Europe and Asia, but others are published. [Black's Travel Pictures — Europe and Asia. 10d. the set. A. & C. Black, London, W.].

Gulliver's Travels, is a book that every boy and girl should read. A very pretty edition comes from the well known publishing house of Ginn & Company. It contains the voyage to Lilliput, and the voyage to Brobdingnag, edited by Edward K. Robinson, and with interesting illustrations by Charles Copeland. The text is given very nearly in the original form, with only such changes as we should all prefer to see in the interests of good taste. So many classics are reprinted for children with regrettable omissions and changes, upon poor paper, and in bad print, that we are particularly grateful to Messrs. Ginn & Company for an attractive and trustworthy book like this at the modest price of forty cents.

A new volume in the Junior Regional Geography series, written by J. B. Reynolds, is on the Americas, and is more especially adapted for the use of children in English schools, but we can strongly recommend it to Canadian teachers as a supplementary hand-book. The many suggestions, questions and problems at the end of each chapter would be a great help to the teacher who has no special knowledge of geography, and few books on the subject. The eighty-two illustrations are varied and educational. [184 pages. Adam & Charles Black, London. 1s. 4d.].

From Messrs. Black we have also *Outlines of Physical Geography*, by H. Clive Barnard, a convenient little volume covering the ground in that subject required for the Oxford and Cambridge Locals. Very much condensed, it is clearly written, and here again the illustrations, diagrams and thought-compelling problems are very valuable. [160 pages. 1s. 6d.].

To Our Subscribers.

If you are one of the many business-like and considerate readers who have paid their subscription for the current year, we cordially thank you.

If you are among those who agreed to pay not later than December, 1914, we urge you to save us the trouble of sending you a reminder.

If you are in arrears, consult your address label; remember that one of the best ways of meeting the present crisis in our national life is to pay your debts promptly, and remit what you owe us.

We regret to say that we have on our mailing list the names of some subscribers from whom we have not heard for three years or more. We do not propose to keep them there. Beginning 1915, WITHOUT FURTHER NOTICE, ALL SUBSCRIPTIONS THREE YEARS OR MORE IN ARREARS WILL BE DISCONTINUED. We are sorry to have to take this step, but it is foolish to continue to send the paper to people who do not value it enough to pay for it.

EXCHANGES.

We are glad to welcome a new exchange, *The Memorare*, edited by the students of Mount St. Bernard College for women, Antigonish, N. S. This magazine made its first appearance in December, 1914, and is to be published quarterly. The editors announce that their principal aim is to stimulate the students to a greater interest and activity in the study of literature, and to cultivate in them the power of literary expression. The REVIEW wishes them all success in this work, and congratulates them upon the excellence of their first issue. The expectations roused by the dignified good taste of the cover design, are amply fulfilled by the contents.

The Trinity University Review has especially interesting chronicles of college and alumni work, including a letter from a member of the class of 1914, now a military prisoner in Germany. *The University Monthly* (U. N. B.), contains a good article on the value and necessity of military training. Other college magazines received with thanks are: *Kings College Record*, and *The University of Ottawa Review*. These are Christmas numbers, and excellent ones. We are particularly glad to notice that nearly all are free from the rather vulgar kind of joke sometimes found in school and college magazines, and we hope that this evidence of bad taste will soon disappear altogether.

We have also received a copy of the Christmas number of *The Reveille*, a school paper issued by the children of the Elihu Greenwood district, Hyde Park, Mass., between twelve and fifteen years of age. The children designed, drew and coloured the cover, and all the contributions are original. There is a full and interesting report, illustrated by drawings, of the work of the school gardens, an account of a visit to a museum, reports of a science lesson, current events, and school news. The most interesting thing about the magazines is that it is so obviously the children's own work throughout. The editor in chief is Mr. S. A. Starratt, so well known to REVIEW readers.

NEW BRUNSWICK OFFICIAL NOTICES.

The normal and public schools of the Province will close for Christmas vacation on December 18th, and will re-open after vacation on January 4th.

There are 204 legally authorized teaching days in the school year, ending June 30th, 1915, of which eighty-one days are in the term ending December 31st, 1914, and 123 in the term ending June 30th, 1915.

For St. John City the number of teaching days for the year, is 203, of which eighty-one days are in the first term and 122 in the second term.

W. S. CARTER,
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Ltd., p. 180; Francis & Vaughan, p. 180; The
Preston Desk, p. 200.

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Address all correspondence to

THE EDUCATIONAL REVIEW,
St. John, N. B.

The Departments of Education and Agriculture for New Brunswick will conduct two Rural Science Schools during the summer vacation of 1915, one at Woodstock and one at Sussex. These schools will open on July 14th, and carry on work for four weeks.

Our schools will be doubly condemned if they send forth boys and girls with no desire to pass on to others what they themselves have received—no desire to be entrusted with work for the nation and the race. What social

service can rank higher than that of training the citizens of the future? If the task of the teacher is belittled, it is partly because teachers themselves fail to realize the full scope of their task and still more because they do not work as a "band of brothers."—*Selected.*

There has been much discussion in the United States on the question of "teaching the war" in school, many people maintaining that, for different reasons, the subject should be avoided in the schools of a neutral nation. G. Stanley Hall, President of Clark University, in an article in "School and Society," represents the effect of the war as a "vitalizer" of history, geography, civics and other studies and declares that it is a "pedagogic blunder to exclude a topic so quickening to intelligence, so rich in matter for which every youthful mind hungers."

The official report of the Rhodes Scholarships for 1913-1914 has just been received.

The number of scholars in residence at Oxford, 1913-1914, was 177, of whom 76 were from the Colonies of the Empire, 88 from the United States and 13 from Germany. During the year 76 scholars completed the term of their scholarship, and at the beginning of the October term, 1914, 63 new scholars (Colonial and American) came into residence.

The course of study followed by the greatest number of scholars is Law. Twelve men took the course for the B. C. L. degree, and 38 entered Jurisprudence in the Trial Honour Schools for the B. A. degree. In the report of the lines of work taken up by the scholars who have completed their terms we find that 167 are engaged in Educational work and 130 are practicing Law.

Since the outbreak of the war, a large proportion of the Colonial scholars in residence have taken commission or enlisted in the Imperial Army. They have been given leave of absence and will be allowed to resume their scholarships at the end of the war.

NATURE STUDY OF ANIMALS.

H. G. PERRY.

On winter tramps by brooks and ponds, through waste fields and along country roads examine carefully the bushes, reeds and old stems of golden rod, etc., for signs of animal life.

Active animal life abounds in almost every locality, but it is not with this that we are now especially concerned, but with the little dormant creatures snugly tucked in their warm winter beds and rocked in nature's cradle,—the cocoons, plant galls and insect nests (Brown tail moth), one is apt to find on such tramps.

Keep the cocoons in insect cages for spring work; the plant galls are for immediate use.

I. Suggestion for School Exercises.

Select a golden-rod-gall and help your pupils describe it. Make sure they know what to look for, then direct them to bring in several for class work.

Ask for measurements and drawings, and direct a dissection of the gall by splitting it a little to one side of its longitudinal axis.

Of what kind of plant tissue is it composed, near the outside and near the centre? After several have been opened what do you find at the centre? Measure the little pupa, note its color. How did the insect gain admission? Are these enlargements (galls), natural to all golden-rod stems? What caused the gall? At what time of year did it begin to grow? What use has it been to the insect?

Explain to your class how stimulation in the form of pressure upon a rapidly growing portion of a plant induces an abnormal growth of its tissue at that point, e. g. trees serving as posts for wire fences show enlargements in a few years, where the wire is attached to their trunks. This gall has been formed in much the same manner, and the object of irritation was a tiny larva, that hatched from an egg deposited at the centre of the stem, while the plant was young.

Make notes of these facts and place whole galls in wide mouth bottles covered with cheesecloth. Keep where they may be under observation for several months.

Take up the Pine-cone Willow-gall in much the same way.

In dissection split through the middle of the stem. Of what is this cone composed? What has happened to the central axis of the bud? Of what are the scales modified forms?

Look in the central axis for the insect: in what state do you find it, larva or pupa? Where and when was the egg deposited? Write a paragraph on the value of these cones to their insect guests.

These insects are internal parasites upon the willow; name some external parasites of the willow and other trees.

Among the scales of the Pine-cone Willow-gall you may find another insect, a cousin of the one in the stem; the eggs of grasshoppers have also been found.

Bring in several of these cones during the latter part of April;—place in jars properly covered, and watch for the appearance of the insects. Keep records and write a short description of all the different forms that appear.

Various species of the rose are also infested with a gall. Gather several of these. Are they as symmetrical as the other two just mentioned? Draw, measure and dissect several and note the number of pupae in each. These are called compound galls. Why? Keep several in jars for spring work, and examine frequently; note the size and color of the insects as they appear.

These insects belong to the family Cynipidae of the order Hymenoptera.

II. Outlines of Life-history of Galls.

The golden-rod galls are enlarged portions of the stem of the golden-rod (*Solidago*), about three-quarters of an inch in diameter. Children are always interested in finding out that they are caused by a tiny baby fly, long before it had wings. It hatches from an egg deposited in the stem when the plant was young, so each gall is the fairy home of a little larva which feeds on the soft pulpy tissues within, and is protected by the harder tissues without. It sleeps during the winter and awakens in the spring, a beautiful two-winged fly about half as large as the house fly, gnaws its way out through the side of its home, spreads its wings and flies away, and thus its life cycle is completed. This fly is called *Eurost Asteris* and belongs to the family Trypetidae, which is represented in

different parts of the world by very injurious insects.

One Trypetid fly is a great pest in Mexico. It lays its eggs in the orange, and its larva is known as the "Morelos orange fruit worm." Another is the Apple Maggot, which tunnels through the pulp of the apple in all directions. This insect has been reported as abundant in New Hampshire and Maine for the last fifteen years. "The first occurrence of the Apple Maggot or Railroad Worm in Nova Scotia, was discovered at Smith's Cove, N.S.," in the summer of 1912. (Experimental Farm Reports for year ending March 31, 1913.) The same report speaks of the Apple Maggot as one of the four worst orchard pests in the province of Quebec.

THE PINE-CONE WILLOW-GALL is formed on willows, especially *salix discolor*. This gall is caused by a small gall-gnat, *Cecidomyia Strobiloides*, which lays its egg in a terminal bud. The egg hatches, and the little larva lives at the heart of the bud, and dwarfs the growth of the stem so that the leaves (scales), become crowded on the short axis and form the cone-shaped gall.

The life history is very similar to that of Eurosta, only it passes the winter in the larva state, taking a short nap in early spring, and later emerges in the winged form.

A closely allied gall-gnat is the Hessian Fly (*Cecidomyia destructor*), which lives in the larva state in the stems of wheat, and annually damages the wheat-crop of America to the extent of many million dollars.

Another form preys upon clover and other grass crops.

In the adult form these gnats are seldom over one-eighth of an inch long. The antennae are long and many jointed and clothed with whorls of short hair; the wings have few veins and the body and wings are clothed with hairs, which are easily rubbed off.

If I left a watchword with you, it would be: "Learn to keep your eyes open, and to see chances where you can be useful." You will have a life then and a career behind you that kings will envy.—*Dr. Grenfell*.

IS THE TEACHER INTERESTED IN HIS WORK? HIS ATTITUDE TO REFORMS.

We print the following communication in the belief that it will interest some of our readers, and not in advocacy of the movement for spelling reform. In the matter of spelling, the REVIEW has always kept, and is as yet content to keep, "in the time-worn rut."

THE EDITOR EDUCATIONAL REVIEW.

Next to clergymen, teachers perhaps come in for the heaviest share of modern criticism. "Your teacher does his work," says the man in the street, "but is he interested in it? Does he fight like the business man to get the best possible results in the shortest possible time? Is he interested in short cuts, new methods? Has he pioneering instincts, or is he an uninspired hireling of the state, grubbing for the biggest possible salary, for the least possible work?"

The reader's answer to these questions would be by no means unfavourable to the teacher, could he have seen the large concourse who met under the heaviest shadow that has yet brooded over the Empire, at the Conference of Educational Associations held annually in January at the University of London. Many of the keenest male members of the profession were absent; their duty had called them elsewhere. But those that remained seemed to have abated not one jot or tittle of their old energy and enthusiasm. They attended meetings, examined the latest educational apparatus and text-books (how many teachers do not spend lavishly of their substance in thus equipping themselves with the best tools?) debated, conferred, explained.

One criticism, often levelled at the teacher, is that he is a creature of prejudice, with a mind impervious to new ideas. Suspicious of schemes and educational experiments, he asks only to be allowed to keep in the time-worn rut.

If this be true, how comes it that so many teachers attended the meeting of the Simplified Spelling Society, thus demonstrating their interest in a reform still hotly debated. True, they have in one sense a mandate from the highest educational authorities to encourage the work of the Society, for has it not received the imprimatur of such men as Sir William Ramsay, Vice-Chancellor Michael Sadler, Sir James Murray, Principal James Donaldson, Mr. J. L. Paton, to say nothing of its distinguished President, Professor Gilbert Murray. Nevertheless, when we come to the

practical application of the Society's principles, it must be admitted there are one or two lions in the way.

Ferocious beasts they may be, but evidently not indomitable, if we are to judge from the hopefulness that pervaded the Society's meeting during the Conference. An encouraging message was read from Mr. F. W. Goldstone, M. P., Secretary of the Organizing Committee of the National Union of Teachers: "As the result of considerable experience in the teaching of children, I have come to the conclusion that very much valuable time is wasted in teaching the intricacies of English spelling. The curriculum is now so extensive that it would be of considerable advantage to divert some of the time required for English spelling to subjects which would allow fuller scope for the cultivation of the initiative and observing faculties of children."

Miss Lucy Silcox, Headmistress, St. Felix School, Southwold, spoke from the point of view of the secondary schools, while the voice of the day-school was heard in the admirable speech of Mr. John Perkins, Headmaster, Sir John Cass Foundation School, Professor Rippmann forcibly summing up. India, according to Professor Mark Hunter, Madras, University is ripe for spelling reform.

The spelling reformers are not to rest content with pious opinions, but are attempting boldly to touch the springs of official action by means of a petition which they wish to present to the Prime Minister on the conclusion of the war. This petition, briefly, asks that a Royal Commission may be appointed on the whole question of spelling reform. It is hoped that the enthusiastic backing of the teachers will influence the authorities. Certainly many signed the petition at the close of the meeting. Reformed spelling may yet be carried over the heads of the indifferent. That Government may not be wholly impervious to the charm of a new idea was proved by the announcement of the Chairman, Mr. William Archer, who pointed to the recent action of the Civil Service Commission in setting as a dictation test a passage in reformed spelling to be turned again into ordinary script.

CHRISTINA JUST,

Secretary Simplified Spelling Society.

44 Great Russell Street,

London, W. C.,

AMENITIES OF THE WAR.

Herr Max Nordau, writing in the *Vossische Zeitung* about Christmas amenities on the Western front, tells the following story from the trenches on the Aisne:—

"The French learnt from a wounded German that a Bavarian Prince was in command in the trench opposite them. This commander had on the previous day excited the admiration of his enemies by his lion-like bravery. They decided to honour the hero as he deserved. The French captain in command of the company was an excellent musician. He got together from his men an orchestra of trumpets and concertinas, and they even found a violin. After two days' practice he wrote a program ornamented by one of his men, announcing that at 5 o'clock on the following afternoon a concert would take place in honor of the brave Bavarian Prince. The program was fastened to a stone and thrown into the German trench. At the appointed hour there was a blare of trumpets, and the captain appeared, armed only with a baton. The concert began, and the program was played through. At the end the whole company sang the "Marseillaise."

"There then appeared an officer from the German trench, who stood at attention and saluted. It was the Bavarian Prince. The French captain returned the salute, while there was a thunder of applause and cheering from both trenches."

The following wise words from one who is honored throughout the British Empire, meet the perplexities of many.

The Bishop of London energetically asserted the right to pray for victory. "When I see," he exclaimed, "all the mourning of the mourners and all the distress of the anxious souls to-day, I say to myself: 'How much more miserable should I have been as an Englishman if my country had not joined in the war; if we had on our safe island watched Belgium trampled under foot, and never stirred a finger; or if we had seen our friends in France have their country devastated before our eyes! No; there is something worse than death, and that is dishonor. And it is because I believe from the bottom of my soul that what have done in this crisis is what Christ would have done — plunged in to save the weak, plunged in, in the cause of honor, truth and the abiding character of a treaty — because I believe with all my soul and conscience I can pray for victory today.'"

LESSONS ON THE POTATO.

L. A. DEWOLFE.

No single lesson on any plant completes the topic; for, being alive, plants must be studied in all stages of their life history. A winter lesson on potatoes, therefore, merely opens the way to more careful study the following summer.

A study of the tubers is interesting in winter. Aside from the shape, size and color, which vary with the individual and the variety, the "eyes" are worthy of observation. Do they look like human eyes in any way? What are they? This question is answered by watching the sprouts grow during the next month or two. What are the sprouts? In summer, the children will discover that when these sprouts come above the ground, they bear leaves. It might be wise not to decide what the "eyes" and sprouts are until we can observe the summer development.

In the meantime, examine the twig of a tree — say that of an apple or a willow. On this twig are buds, systematically arranged. Make sure that the arrangement is systematic. Where are the buds closer together, near the tip of the twig or towards its base? Where are the "eyes" of the potato most thickly clustered? Are they systematically arranged. Look at a long slender potato for this. Keep the comparisons between the twig and the potato in mind until spring. When growth begins, compare them again. Your children will then find that buds on the twigs develop into leaf-bearing branches, just as potato "eyes" develop into leaf-bearing sprouts. Moreover, one can always trace branches back to stems. Buds on the stems made branches possible. If the children should conclude that "eyes" must be buds, what is the tuber?

Another proof that the tuber is a stem, is the fact that sometimes little tubers instead of sprouts grow from the "eyes." If a little tuber is a branch, it follows that a big tuber bearing it might properly be called a stem.

Of course, it is much shorter to tell the children a tuber is a stem, and save all this time. But think of the pleasure of discovery you thus deny them!

In the winter, one might profitably collect as many varieties of potatoes as possible. Study the points considered in judging potatoes. The color of skin, its roughness or smoothness, depth

of "eyes," uniformity of size, firmness of flesh, etc., are points to observe.

Even now children will plan what potatoes they will plant in their home gardens next year. Discuss with them the kind of soil best suited to potatoes. Will they do well on clay soil? When potatoes are "wet" after being cooked, is the variety always to blame; or might the same variety be "dry" on a different soil? Try planting the same variety on different soils.

At planting time, a lesson on propagation is in order. Do we plant potato seeds? What do we plant? Why? Do we propagate any other plants by cutting up and planting pieces of the stem? Try it with willows, roses, snapdragons and geraniums.

Do potatoes produce seed? We'll begin to suspect they do when we see the blossoms grow next July. What are blossoms for, if not to produce seed?

Why do we not grow potatoes from seed? Save some potato "balls" next fall to plant the following spring. We may learn something by so doing.

Do you know anything about seed selection in general? That is a very important topic. In particular, selecting seed-potatoes now suggests itself. How many of your farmer-friends select theirs in the field at digging time? Can you find out why that is best?

What diseases affect potatoes? The potato beetle ("bug") is not a disease, but a pest. Study the insect, its life-history and methods of control.

The commonest diseases are the blight and the scab. Both are caused by extremely small plants (fungi), which feed upon the tissues of the potato. The blight affects the leaves, and the scab attacks the tuber.

Since these are of so great economic importance, I suggest that those interested should write to the Department of Agriculture, Ottawa, and ask for a bulletin on Potato Culture. Text-books on botany will give information about fungous diseases; but the technical language there used should not be passed out to children. If the teacher wishes the information for herself, all right.

Try to learn, through bulletins and otherwise, which varieties of potatoes are best in any given locality. Besides studying potatoes from the gardening and botanical standpoint, consider

their uses. Aside from food, the greatest use is in the manufacture of starch. Let the children grate a potato, stir the pulp in water, strain, evaporate the liquid, and see what is left.

Have them draw potato tubers now, and draw the whole plant next summer. Discuss the geography and the history of the potato. Do we export or import them? Where do we sell them? This is a big subject for the right kind of teacher.

HIGH SCHOOL LITERATURE.

THE PRINCESS.

ELEANOR ROBINSON.

I have had requests for some suggestions for teaching Tennyson's "Princess." I should be very glad if teachers would make such requests more definite and detailed: Methods of presenting and studying a piece of literature must vary so much with the experience, attainments and tastes of both teacher and student, that it would be a great help towards making these suggestions more useful if I knew, for instance, whether the pupils were at all familiar with Tennyson or if this poem was to be the introduction to him; whether they had read any poetry other than that prescribed in the course of instruction; if they liked poetry; if they could easily master a story told in verse; if they had a fairly good vocabulary; if they had access to books of reference, and to a complete edition of Tennyson, or were dependent upon their text books; if they could read aloud decently; if they could be depended upon to read the poem, for the story, out of school, so that the lesson time might be given to detailed study and appreciation; or if they needed constant help in their reading; how much time could be given to the literature lessons. As to the teacher—has he had much experience, or little, or none? Does he read poetry, and especially Tennyson's poetry, for his own pleasure? What difficulties does he foresee in teaching this poem? Has he a definite aim, other than that of getting ready for examinations, in teaching literature? Does he want general suggestions, or detailed ones? Has he found any of the notes in the REVIEW particularly useful, and if so, which ones? Information, on any or all of

these points would be of use. Meanwhile, I will give what advice I can.

And my first bit of advice is—get the prescribed edition (Professor Woodbury's, Longmans' English Classics), and study very carefully both the Introduction and the General Suggestions. I am assuming, and I hope it is not too large an assumption, that you have made yourself familiar with the poem by repeated readings, and that you can follow and apply the editor's appreciative comments, and see the value of his wise advice about how to help your pupils to enjoy it. Lay to heart especially the following passages: "It is the peculiar aim of poetry to give pleasure of a particular kind; whatever lessens that pleasure or destroys it, attacks the life of poetry at its source.—" "Unless the student is pleased, and pleased in the way which belongs to poetry, he will neither understand, love, nor value it."

After reading and thinking over these two chapters, go over them pencil in hand, and mark such passages as need illustration from the poem. For instance, on page xxvii, we find, "the metrical effect of the hurried or checked lines." Number in the margin, or write in full in your note book, I. 166,

"Many a long league back to the North. At last."

And as many more hurried or checked lines as you can find. Illustrate as fully as possible in this way the paragraph on page xxvi, beginning, "From the start," especially, "the constant use of image," and, "where it does not use images." Compare in this respect, Florian's account of Melissa's trial.

"With hooded brows I crept into the hall,"

iv. 206, with the description of the girls coming across the Park,

"Some cowed and some bare-headed, on they came."

vi. 61, and decide which passage differs most from prose, and how. Another passage to be fully worked out is on page xxvii. "the little pictures, the more melodious and perfect lines, etc." It will be surprising if such a study, faithfully carried out, does not greatly increase your own pleasure in the poem and make you eager to bring it before your students.

But you have to consider not only your reading, but your readers. So go through these chapters again, this time marking and making notes on what you think best suited to the needs

of your class. You will, possibly, have to leave out a good deal that you yourself enjoy, for you cannot force enjoyment upon others. And note what Professor Woodbury says of the difficulty of the poem.

What is the minimum acquirement to be expected of a High School class? **A firm grasp of the story.** The questions in Appendix v. sections one and two, will be of assistance; or it may be necessary to put simpler questions. Some readers are very lazy about getting the incidents of a plot clear, and in order Try to get them to see that in grasping the incidents, and realizing how one depends upon another to make up the whole thread, or set of threads, in a story, they are gaining a certain power that will be of increasing use and pleasure.

Some appreciation of the sound of the poetry—of beautiful phrases, lines, and paragraphs; of the suiting of sound to sense. Unfortunately, through our neglect of good poetry in the lower grades of school, many children lose the keen enjoyment of rhyme, metre, and beautiful phrasing, so noticeable when they are little, and come to the formal study of great poems with ears dulled to their beauty. Then, very often, the reading is left to be a matter for the eye alone, and so a world of delight is never entered. Draw the attention to beautiful passages, and ask the students to pick out single lines or phrases that please them. Follow the advice on page xxvii. "The power to read verse," etc.

Appreciation of the beauty and suggestiveness of the imagery. "The Princess" is particularly rich in imagery and in pictorial passages, and these are often combined, as in,

(a). "All her thoughts as fair within her eyes,
As bottom agates seen to wave and float,
In crystal currents of clear morning seas."

(b). "light
As flies the shadow of a bird, she fled."

Of rather special interest are the images used in describing the Princess. Collect them, and compare her father's words,

"All she is and does, is awful."

Do the images suggest this quality of awfulness? Compare the imagery used in the description of Melissa, and of the girls seen together, e. g.

"as flies

A troop of snowy doves athwart the dusk."

Set the pupils to picking out passages from which pictures could be painted, e. g., The lines about Psyche and her "arrow-wounded fawn." II, 251; and lines whose sound suggests the sense, as:

- (a). "To plunge in cataract, shattering on black blocks."
- (b). "the splash and stir
Of fountains spouted up and showering down."
- (c). "And murmuring of innumerable bees."

Connected with this study of the imagery and pictorial passages is the poet's way of reckoning time. How old was Psyche's child? How long did the Prince pace the terrace? Compare the three statements:

- 1. Within a fortnight.
- 2. Before the new moon became full.
- 3. "Ere the silver sickle of that month became her golden shield."

What is gained by stating the time in the third way?

In proportion to the ability of the class, and the time at your disposal, you will take up some study of the characters, and some discussion of the arguments. The suggestions for this in the introduction are excellent. But whatever lines of study you follow, keep steadily before you Professor Woodbury's concluding counsel.

"It will matter little whether a student has garnered a good deal of curious and interesting knowledge about matters spoken of in the poem; but if he has come to like and value ten lines of it only, that is the real gain, for they will be a standard of literature with him, a vital standard which has passed within and become part and parcel of his tastes."

BATHING HABITS OF BIRDS AND BEASTS.

Pigeons, larks and cockatoos like their bath in the rain. Game birds and poultry take dust baths. The common sparrow likes a dry shampoo in the dust and a plunge bath in the water. Reptiles soak themselves; elephants daub their calves with mud, then wash it off. Rhinoceroses, buffalo, dogs, bears and tigers like to wallow; the equine tribe favor a roll in the sand; cats, mice and their respective relatives lick themselves clean; bats lick and scratch, and it is said that the continual scratching of monkeys is not so much in the search of parasites as a kind of self-currycombing.

WHO, WHAT AND WHERE?

NO. V.

DEFINITIONS AND THAT SORT OF THING.

1. What, according to George Eliot, are the essential attributes of a lady, and who possessed them?
2. What does Tennyson name as "the sins of emptiness?"
3. What is the great art of letter-writing, as defined by Sam Weller?
4. "Anne smiled, and said, 'My idea of good company, Mr. E.—., is —.'" Who was Anne? What was her idea of good company? Did Mr E.— agree with her?
5. What state of mind is described by Bacon as "heaven upon earth?"

ANSWERS TO JANUARY QUESTIONS.

1. Damon and Pythias, two youths of Syracuse. Damon sentenced to death by the tyrant Dionysius, had leave to go home to settle his affairs, leaving Pythias as his surety. Damon being delayed, Pythias was led to execution, but Damon arrived in time to save him. Dionysius was so impressed by their friendship, that he pardoned both.
2. The cat in Hans Andersen's story, "The Ugly Duckling." She said to the duckling, "I tell you unpleasant truths, perhaps, but that is how you may know your true friends."
3. Selima, the "Favorite Cat Drowned in a Tub of Gold Fishes."
"No Dolphin came, no Nereid stirred;
Nor cruel Tom nor Susan heard,
A favorite has no friend!"
4. (a). Cassius to Brutus.—"Julius Caesar." iv. 3.
(b).—David, apostrophising Jonathan.—2 Samuel, 1. 26.
(c).—Elaine, of Lancelot.—"Lancelot and Elaine." 1082.
(d).—Robert Browning of his friend Alfred Domett, the "Waring" of the poem of that name.
5. (a).—"Heracleitus" by William Cory.
(b).—"In Memoriam," xxiii.
(c).—"St. Andrew's Day, in "The Christian Year," by John Keble.

COMMENTS ON JANUARY ANSWERS.

Only two sets of answers came in. A sad falling off! Where are M. V. L., Morleena Kenwigs, Peggotty and the rest? Hans Andersen's truthful and disagreeable cat was unknown or forgotten, but quotations bearing on question 2, were given from Bacon and Bulwer-Lytton. No. 5 c, was not attempted.

Marks: 20 allowed. M. L. L. Club, 16; Jill, 10.

BIBLE READINGS FOR OPENING EXERCISES.

1. Ecclesiastes, iii. 11-17.
2. St. Luke, ii. 41-52.
3. Psalm xv.
4. Ecclesiastes, v. 1-7.
5. St. Luke, iv. 38-44.
6. Psalm xix.
7. Ecclesiastes ix, 13-18.
8. St. Luke, v. 1-11.
9. Psalm xxii, 23-31.
10. Ecclesiastes xii, 1-7, 13, 14.
11. St. Luke vi, 27-36.
12. Psalm xxvii, 1-6.
13. Isaiah xxvi, 1-8.
14. St. Luke vi, 37-45.
15. Romans xii, 9-21.
16. Psalm xxxiii, 1-12.
17. St. Luke vii, 11-17.
18. St. Matthew viii, 23-27.
19. Psalm xxxiv, 1-10.
20. St. Luke xii, 16-21.
21. St. Matthew xii, 46-50.
22. Psalm xxxiv, 11-22.

A CHINESE SMALL BOY ON WAR.

We cannot give the name of the writer, but by the kindness of Rev. C. G. Sparham we can give the early attempt of a young Chinese boy, who is only just beginning to learn English, to describe the war. He is in one of the L. M. S. day schools near Hankow: "Now there is a real battle in Europe. This began because the Prince of Austria went to Servia with his wife. One man of Servia killed them. Austria was angry, and so fight Servia. Germany write a letter to Austria, I will help you. Russia write a letter to Servia, I will help you. France did not want to fight, but they got ready their soldiers. Germany write a letter to France. You don't get ready or I will fight you in nine hours. Germany to fight them; pass Belgium. Belgium say I am a country, not a road, and Belgium write a letter to England about Germany to them. So England help Belgium."

The simplicity, clearness, and directness of the explanation makes the statement most interesting. — *Yarmouth Herald*.

God give us men! A time like this demands Strong minds, great hearts, true faith, and ready hands.— *Holland*.

For the REVIEW]

ARITHMETIC IN GRADES THREE AND FOUR.

I doubt if there is anything new to be said on the subject of arithmetic in the lower grades. The importance of this subject in the school curriculum has never been questioned; Educational Journals and Teachers' Institutes have vied with one another in the endeavor to find out the best possible methods of presenting its difficulties to the various grades, and yet so long as inexperienced teachers are continually taking the places of experienced ones, and old problems are thus becoming new problems, it will be necessary to go on discussing the same old difficulties year after year.

Number work in grades one and two has quite recently been the subject of a paper in these pages, but perhaps a glance at some of the difficulties to be encountered in grades three and four, particularly grade four, may not be out of place at this time.

Pupils entering grade three are supposed to have covered the operations on numbers up to one hundred. The obvious thing, then, is to complete the tables of eleven and twelve, and drill thoroughly for accuracy:

When one stops to consider that on a knowledge of the tables hangs all the future work of division, both short and long, one does not doubt the value of the months of drill which teachers find so necessary at this stage.

The drill on the table of twelve may take the form of changing feet to inches, inches to feet, individual things to dozens and dozens to individual things. "How many dozen in a basket containing 117 eggs?" is a much more interesting problem than, how many twelves in 117. To compute how many inches in six feet and eleven inches seems to have raised the child to the dignity of working problems, and yet is only a drill on the table of twelve, with the added advantages of involving the process of addition.

To obtain rapidity and accuracy in addition and subtraction will require all the time that can possibly be spared in this grade, and I know of no better way of keeping children sharpened up in all matters of mental drill, than by taking places in a class. Inattentive pupils soon become attentive with the prospect before them of gravitating toward the foot, and

even the very slow ones sometimes taste the joys of "going up."

Grade three is pre-eminently a grade for drill, the continuation of grade two work, and the introduction of simple problems involving yards, feet, inches, pecks, bushels, dollars, etc.; but in grade four, one ventures out into new and untried fields. One can hardly enumerate the new work to be covered—multiplication of numbers involving six and seven digits, short division, long division, subtraction, factors, the use of the decimal point, finding averages, reading and writing numbers of twelve figures and upwards, Roman numerals, and problems of many kinds are expected to be taught in one short year; and the surprising thing is that with pupils of average ability, it can be done.

With accuracy in the tables secured in grade three, multiplication offers no particular difficulties, but how about the much-discussed subject of long division? Are its difficulties real or imaginary? My own opinion is that the difficulties of teaching long division have been very much over-estimated.

With no particular method in teaching the subject except the scriptural rule "line upon line, precept upon precept, here a little and there a little," one can obtain, I think, very satisfactory results.

Just before attacking this subject, it will be found helpful to use as mental arithmetic such questions as: How many yards of cloth at fifteen cents a yard can I buy for seventy-five cents? This paves the way for dividing by numbers larger than twelve, and proves a great help when judging how many times our divisor is going to be used. It is a good plan to begin to teach long division early in the school year—usually several weeks before Christmas. This gives even the slowest child a chance to become thoroughly acquainted with the process before the end of June. Moreover, there are so many practical questions involving long division, to be worked, that knowledge of it quite early in the term is really a necessity.

Here is one teacher's method of handling the subject: The first day, one or two simple questions are worked out with the class, the process being explained as clearly as possible, and the subject dismissed for the time. This is repeated for perhaps two weeks, the children actually doing the work while the teacher asks

questions and explains difficulties. The class is then warned that on a certain day they will be expected to work a question without assistance. Most of the children look quite confident of the outcome of this test—but there are surprises. Perhaps half the class displays with pride the question correctly worked. Half as many more have met with difficulties, easily explained—due perhaps to inaccuracy—and the rest are entirely at sea. The difficulties are soon cleared up, and then comes the real work of making the process clear to the dull ones—a process not one whit more difficult than teaching subtraction to the same individuals.

Teaching children to write numbers involving billions, millions, etc., is one of the things calling for patience and ingenuity, and yet it is wonderful how soon the immature brain of grade four seizes on the idea presented.

It is comparatively easy to teach the child to read numbers correctly, but when it comes to writing them for himself, he finds it a rather more difficult undertaking. Suppose he is asked to write the number 17,009,084. He has been drilled on the different families, billions, millions, thousands, etc., and knows their relative positions. The first step is clear. He writes the seventeen and places after it a comma, and the position of that comma cannot be changed. A reminder that the nine in the thousands' place must fill three places and still read nine, does away with the tendency to represent the family of thousands by a single nine; and the same statement concerning the eighty-four which must fill three places and still read eighty-four soon results in a correct placing of those figures.

Should any family lower than the first one in the given number not be represented, the child soon sees that in order to make the number read correctly when completed, the space must be filled in with ciphers.

Of course there are children, and will always be children, to whom this explanation will mean very little. In such cases, I have tried starting with twelve ciphers divided into periods of three and named respectively, billions, millions, thousands, etc., and by actually placing the number under the corresponding cipher above, have seen the light of understanding gradually break on the slow mind, and have allowed the child to use this device in writing a series of numbers and getting them placed correctly for

adding. This, however, might have its objections in any but extreme cases.

A tendency to shirk names and explanations, and to ignore decimal points is one of the difficulties to be overcome in this grade. If one will accept slipshod work of this kind, one will get it from nearly every member of the class, but to insist on this attention to detail means just as surely to get it, and to get also greater accuracy in the work itself.

One could never hope to explain the various problems to be covered, without the help of mental arithmetic. A mental problem, simple in itself, but whose working out is similar to that of the larger question to be solved, often proves most illuminating.

Above all, children of these grades can be treated as though they possessed both intelligence and the power of application. They have both; and do not require every dose of arithmetic to be sugar-coated by being put into the form of a story. Too much "story" and explanation and "method" serves only to hopelessly befog the child who is much better able to grasp a straight statement. Neither is it necessary to base one's questions on things relating to dollies and doggies and kitties—practical questions relative to everyday life will be found to be much more appreciated. When one sees the "devices" and "methods" adopted, or presumably adopted, since they occupy a large amount of space in some school journals—to teach children the most ordinary combinations in arithmetic, one sometimes wonders if the race of children with intellect is supposed to have become extinct.

Text-books have their places, but only as a guide in the hands of the teacher or as a special treat for the class on rainy days or Fridays.

There is no royal road to teaching arithmetic. After one's best efforts, there will always be members of the class whose number work is the teacher's despair. But if the majority of the pupils in grade four can answer intelligently simple questions based on the work covered, and can work addition, subtraction, multiplication and division with a fair amount of speed and accuracy—accuracy to be demanded rather than speed, although the latter is to be most earnestly coveted—the teacher of a large class in this grade is justified in feeling a certain amount of satisfaction over the result of the year's work.

HINTS FOR FEBRUARY AND MARCH.

Do not forget to drill on the spelling and pronunciation of the word February. This is necessary in almost all grades.

If the little ones have not yet learned the rhyme—

"Thirty days has September,"

this is a good time to teach it, and for those who are far enough on, to practice writing the names of the months, with the abbreviations. Almost endless exercises in easy composition suggest themselves.

1. Write a sentence about each one of the Winter months; of the Spring months; of the months that have thirty days; of the months that have thirty-one days.

2. Put on the blackboard, or dictate, sentences like this: Longfellow was born on the twenty-seventh of February. The first day of March is Saint David's day. And have the children write them, using the abbreviated date.

3. Make sentences telling something that we do in each month of the year; telling why you like different months.

For number work, numerous little addition problems about the days of the months may be made. How many days in the three winter months? and so on, with different combinations. Put a list of dates, 1902, 1903, 1904, etc., on the board and let the children find which are leap years, by finding the multiples of four. Remember that the even century is not a leap year unless the first two figures make a multiple of four. The year 1900 was not a leap year, but 2000 will be. How many days has a leap year? Find out by addition.

The subjects for reading and observation named in the January REVIEW are suitable for February. Suggestions for Longfellow's birthday will be found in the REVIEW for February, 1914.

The lengthening days and the increasing power of the sun furnish topics for morning talks. If calendars are kept and the weather noted, comparisons may be made of the number of stormy or sunny days in the different winter months? What signs are there that March is a spring month? If there are English or foreign children in the school they may be able

to tell something of different conditions in March. An old English rhyme says:

March brings breezes loud and shrill,
Stirs the dancing daffodil,

The American poet Bryant writes—

The stormy March has come at last,
With wind and cloud and changing skies.

How does March get its name? From the Roman god of war, Mars. Here we come to history again. The names of all the months were given by the Romans. Why is it that September, which is really the ninth month of the year, has a name that means the seventh (from the Latin *Septem*, seven)? Because the year used to begin in March. Longfellow says in the third verse of "The Poet's Calendar"—

I Martius am! Once first and now the third,
To lead the year was my appointed place,
A mortal dispossessed me by a word,
And set there Janus with the double face,
Hence I make war on all the human race,
I shake the cities with my hurricanes,
I flood the rivers and their banks efface,
And drown the farms and hamlets with my rains.

Sometime in March teach the older children how to find when Easter will come in any year. Easter Day is always the Sunday following the first full moon that comes after the 21st of March. So that Easter never falls earlier than March 22nd, nor later than April 25th. This year Easter Day is the 4th of April. Let them work this out with a calendar that shows the phases of the moon.

March winds are proverbial, and the winds, their directions, the good and the harm they do, offer another subject for talks and compositions. For reading, story telling, or memorizing, take Stevenson's "The Wind" and "Windy Nights," Howitt's "The Wind in a Frolic," the story of the Wind and the Sun, Aerolus and the bag of Winds. The last two are good stories to dramatize, which is a big word much used now to describe what we used to call "playing at stories."

To illustrate simile and metaphor compare the proverb, "March comes in like a lion and goes out like a lamb" with William Watson's,

"March that comes roaring, maned, with rampant paws,
And bleatingly withdraws."

The lives of St. Patrick and David Livingstone,

the great missionary and explorer (born March 19, 1813), give material for stories of heroism and devotion.

Christina Rossetti's, "Winter Rain," and "The Wind," by Dorothy Wordsworth, are suitable for the primary children.

THE WIND.

What way does the wind come? What way does he go?

He rides over the water, and over the snow,
Through wood and through vale; and o'er rocky height,
Which the goat cannot climb, takes his sounding flight,

He tosses about in every bare tree,
As, if you look up, you plainly may see;
But how he will come, and whither he goes,
There's never a scholar in England knows.

— *D. Wordsworth.*

WHAT O'CLOCK ARE YOU?

By Francis Kirkland.

It was John's turn to think of a new game to play, for the old games were worn out; so John stopped his sister Emily on the stairs, and asked, "What o'clock am I?"

Emily looked at her brother. His lips were drawn together for whistling, but no sound came. His left arm was bent, as if he were carrying a burden.

Emily clapped her hands. "You are nine o'clock, schooltime," she said.

"Right!" cried John. "Now you try it."

Emily thought for a moment; then she went to the door and looked up and down the street. She came back and shook her head. After a moment she ran to the door again. When she closed the door she pretended to hold something in her hand.

"Oh," said John, "you were looking for the postman. You are eleven o'clock."

"That is right," Emily answered. "Let's go and tell Marion."

Marion laughed. "Now you both guess what time I am."

She lay down on the floor and put one arm under her head; then she started up and rubbed her eyes. Afterwards she lay down again.

"Seven o'clock!" cried Emily. "Marion never likes to get up."

And so it went, until every hour of the day had been acted in many ways.— *Youth's Companion.*

REPORT ON NATURE STUDY OBSERVATIONS.

By R. P. STEEVES, Director Elementary Agricultural Education for New Brunswick.

The following letter was sent out in October last to all teachers doing school garden work in the public schools in New Brunswick:

"TO THE SCHOOL GARDEN TEACHERS AND PUPILS:

A series of observations extending over a period of two months (October 20-December 20), is asked for. These observations may include any or many realms of Nature Study. Personal observations and studies of objects (animals, plants, physical nature environment), are desired. These should include records, notes, drawings (made at time of observations), and conclusions arrived at. Dates should be given in every case.

A neat and accurate summary of the two months' work is asked for from every pupil entering the contest.

It is intended to have all articles sent in, handed to competent judges. The four best in every County will be duly recognized, and the names of winners will be published in the EDUCATIONAL REVIEW.

Every paper must bear the name of the worker. The name of the school (number of district), name of teacher (school or department), the grade of the pupil and pupil's age must be given.

Papers must be sent in not later than Dec. 28.

(Sgd.) R. P. STEEVES,

Director Elementary Agricultural Education."

Only such work as pupils might voluntarily undertake was desired. It was not asked for as a part of the school work, but as work outside of school, carried on by individual pupils on their own account. Naturally such work would reflect the teaching given in the school, as each pupil in what he did would be applying the ideas that he had gained there.

Pupils from five districts, representing as many counties, have sent work that they have done, and it has been examined with some care.

Following is a list of pupils by counties:

Albert four, York five, Queens three, Restigouche six, Kent fifteen.

The following list indicates the position of pupils in the several counties:

RESTIGOUCHE.

(District No. 14. Dalhousie.)

- | | |
|------------------------|-------------------|
| 1. Frances Macpherson, | 2. May Barrieau, |
| 3. Nan Wetmore, | 4. Peter Stevens. |

KENT.

(District No. 1. Richibucto.)

- | | |
|---------------------|--------------------|
| 1. Eleanor O'Leary, | 2. Joy Whiteside, |
| 3. Rufino Johnson, | 4. Alma MacKinnon. |

ALBERT.

(District No. 4. Coverdale.)

- | | |
|-----------------------|-----------------------|
| 1. Blair C. Mitchell, | 2. Currie A. Collier, |
| 3. Emma Wilson, | 4. Audret Gaskin. |

QUEEN'S.

(District No. 8, Johnston.)

- | | |
|-------------------|------------------|
| 1. Robert Fanjoy, | 2. Ethel Fanjoy, |
| 3. Gladys Fanjoy. | |

YORK.

(District No. 3, St. Mary's.)

Jennie E. Allen,	Napoleon Godbout.
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The papers show much neatness; care has evidently been taken. Most of the exercises show that the pupils are greatly interested. The pupils in the Albert County school have shown the most originality. Individual work is more marked.

After the report on the work received between the 20th and 28th of December had been made out, the following came in from York County.

Their order of merit is as follows:

YORK COUNTY.

(District No. 9, Southampton.)

- | | |
|------------------|------------------|
| 1. Eva A. Scott, | 2. Perley Scott, |
| 3. Norman Corey. | |

A TALE FROM THE FLEET.

One realises the wonderful spirit of the Navy (says the "Nation") not merely in the story of the loss of the Formidable, but in accounts of the slighter accidents of the fleets. The other day, for example, the commander of a destroyer, rolling heavily in a gale, and with her engines disabled, tried to lessen the strain by ladling out oil. The seaman engaged in this work was washed overboard, and washed back again by a returning wave. He picked himself up, saluted his officer, and said: "Very sorry, sir; lost the bucket."

USEFUL BOOKS.

The MacMillan Company has recently issued a "Manual of Weeds," written by Miss Ada E. Georgia of the New York State College of Agriculture at Cornell University. The book is attractively gotten up and is the fifth volume of the excellent series of Rural Manuals, edited by Dr. L. H. Bailey for the use of Agricultural Colleges, High Schools, and those interested in rural affairs. The publication of the "Weed Manual" will fill a long felt want, for there has been a steady and constant demand for authentic information regarding weeds and their control. Many experiment stations in the United States and the Federal Department of Agriculture at Ottawa have issued bulletins describing various weeds and their control, but here we have the latest information on this subject well arranged and presented in a most attractive and readable form.

The book deals with practically all the weeds known to occur in the United States and Canada. and nearly every weed is illustrated with a black and white drawing by F. Schuyler Mathews.

In order to show the scope and character of the work, it may be best to give in bare outline a brief summary of the various chapters. The preface gives us in a few brief sentences the viewpoint of the author. It is well worth repeating here.

"Nature is the great farmer. Continually she sows and reaps, making all the forces of the universe her tools and helpers. The sun's rays, wind, rain, frost and snow, insects and birds, animals small and great, even to the humble burrowing worms of the earth, all work mightily for her, and a harvest of some kind is absolutely sure. And to the people who must wrest a living from the soil, not only for themselves but for all mankind besides, it must seem that Nature's favorites are the hardy, aggressive, and often useless and harmful plants which they have named weeds."

This opening paragraph is indicative of the author's approach to her subject, and clearly shows her appreciation of Nature's great forces and an intimate acquaintance with them. The first chapter presents in a clear and forceful manner the answer to the question, what are weeds, and then proceeds to outline in detail the main principles which should govern all efforts towards their control. Following this is a chapter on the financial losses due to weeds, and here is presented the startling facts as to the enormous losses now suffered by the American farmer

The next chapter is a short and concise account of weed dissemination, which will well repay careful reading by all those interested in the improvement of agricultural conditions. There is also presented a concise account of the various chemical herbicides which have proven efficient in the control of certain obnoxious weeds.

Following these introductory chapters is the main part of the book,—the descriptive list and means of control. The plants are arranged according to families, the ferns, horsetails, grasses being discussed first. The nomenclature of Gray's Manual, seventh edition, is used throughout. Under each plant there is given its common and scientific name, and the following valuable information is printed in smaller type at the beginning of the discussion,—other English names native or introduced; annual, biennial or perennial; how propagated; time of bloom; seed time; range; habitat. Then follows a discussion of the plant itself, its characteristics, mode of growth, methods of reproduction, and any other important facts deemed necessary for a clear conception of the weed under discussion. The means of control are given as fully as possible, and all sources of information seem to have been fully consulted. The three hundred and eighty-six illustrations should aid greatly in identification. In all, five hundred and twenty-eight weeds are fully discussed.

The book concludes with a bibliography, a list of weeds known to be poisonous or mechanically harmful to animal life, an excellent glossary of terms, and a well arranged index.

The scientific accuracy of the book is excellent. Thus we have an authoritative book on this important subject, which should prove of great value not only to agricultural colleges, high and normal schools giving courses in agriculture, individual farmers, but also to nature study teachers in our common schools, who are always on the search for non-technical subject matter presented in an accurate and readable form. It is to be hoped that the material contained in this book will be used by the grade teachers in widening the scope of their subject matter.

ROBERT MATHESON.

Cornell University, Ithaca, N. Y.

December, 1914

BOY SCOUTS AND THE WAR.

The fact that Boy Scouts in England and on the Continent are doing good work in the war, has given fresh impetus to the organizations in Canada. The Canadian General Council of the Boy Scout's Association has sent a travelling secretary, Mr. F. R. Perrott, of Ottawa, to the Maritime Provinces to organize Scout Bands and to stir up the interest of the public. New Brunswick has already added about 150 new scouts to her bands. The following account of the activities of the boys will be of interest: Some thousands of Scouts are actively employed in England, France and Belgium along the lines indicated by Baden Powell in his original order. All Scouts employed are recognized by the government or police departments and are paid a shilling a day. In regard to their official standing, a bulletin was issued stating that "Scouts have been recognized by the government as a non-military body, and no Scout or Scout officer in uniform must on any account carry arms." Further, it is stated that "The uniform of the Boy Scouts (B. P. hat or sea scout cap, and official fleur de lys badge essential), is recognized by His Majesty's government as the uniform of a public service, non-military body." Among the services rendered by the Boy Scouts in England, are those of two thousand who are watching the telegraph wires to prevent them from being tapped. Another body went into the country and helped with the harvesting. Others are in camp watching and patrolling an aircraft factory. At Wolverhampton, under the suggestion of Sir Richard Paget, each Scout has undertaken to raise six chickens to help the food supply, while in another district all the waste land has been planted by the Scouts with turnips for the same purpose. They have helped the Prince of Wales with his National Relief Fund; made bandages; sixty of them, all cyclists, have relieved the telegraph department, overwhelmed with work; and another public department required the services of one hundred Scouts continuously for a week. In France their work has been confined largely to Red Cross work. In Canada, they have also helped in the work in various ways of the organization. In Belgium, they are apparently divided into two classes, one serving at the front as volunteers, the other doing non-military work, but the

Germans evidently, according to a recent letter from the Secretary of the Boy Scout Association in England, to the Chief Scout Executive in the United States, Mr. James E. West, regard the Belgian Boy Scouts as combatants. The work of the German Boy Scouts is unknown, but their training was largely military and the capacity in which they, as a body, may be utilized during the war, can only be guess work at best. The idea of the Chief Scout is that the work of the British Boy Scout will be entirely protective and preventive, as is that of the police; the Boy Scout having, of course, no power to arrest. These boys have received careful training in the principles of first aid, in woodcraft, in organization and in the use of individual powers. They are taught the value of courtesy, of gentleness, of courage and of charity. To-day, when the European nations are fighting for honor and liberty, they should be a valuable asset in the preservation of national composure.—*St. John Globe.*

DISCIPLINE.

[A paper read by Miss V. Lena Scott, of Bairdsville, N. B., before the United Institutes of Carleton and Victoria Counties, at Woodstock, on Thursday, December 17th, 1914, slightly abridged.]

Some very wrong-minded person long ago spread the report that teaching was humdrum work. Unthinking people have believed it ever since. Dickens, and other story-tellers have repeated the falsehood so skillfully that it is not uncommon to find, even among teachers themselves, a notion that school-keeping is dull and the teacher a monotonous-minded person deserving only pity. This is a curiously mistaken idea. Of all the interesting things in the world children are the most universally attractive. So various, so surprising, so naturally merry, so fascinating, and to the on-looker so suggestive of happy experiences of one's own past, are the personalities sent to school, that it is only an unnatural and wrong-headed judgment, that fails to see more attractions than drawbacks in teaching.

Boys and girls are activities that cannot long be left in safety without well-understood, well-planned, well-directed and well-organized industry. These young people can take the full measurements of a teacher in less time than inspectors can. Unconsciously they yield obedience, respect and admiration to teachers who are "masters of their job," but no force on earth can make them yield

these cardinal elements of the learner to those who are weaklings in the profession.

Discipline, like the bridle in the hand of a good rider, should exercise its influence without appearing to do so. True discipline can be secured only when the utmost regard has been shown for the liberty of the pupil.

The iron school of discipline was wont to kill the individuality of the child, by suppressing every actor out of harmony with the mechanical system of order in the school. Unhappily this style still clings to many of us, but not to the majority.

No child or adult is disciplined until he has secured self-control at all times. The aim of the teacher, therefore, should be to enable the child to master every action of his own. Iron-bound rules and regulations never obtain such a reward. By no amount of force, by no number of commands, shall we secure unto the child freedom and mastery of itself.

To instill such a form of discipline into the pupil, one must resort to considerable tact and ingenuity. "Liberty ceases to be such, when it infringes on the rights of others," so the activity of the child ceases to be liberty when the exercising of such activity is a detriment to the progress of the other pupils.

This leads us to the idea of discipline for the welfare of the school as a whole. And if for the school as a whole, why not carry such a form of discipline all through life for the welfare of society as a whole? Our whole career is one of action. If during the years of school life when impressions life-long are implanted in us, we are continually restrained from assisting ourselves, how will our after life be affected by such childhood habits? The law of habit will here assert itself and tend to make us dependent upon others. Such a conception of one's conduct, in manhood, would soon reduce us to a race of weaklings, rather than a society of independent, inventive and progressive individuals.

It behooves us then, as moulders of the plastic minds, entrusted to our care, carefully to weigh the motive underlying each act of the child, ere we ruthlessly crush the unfolding of a new idea in his mind. It behooves us constantly to encourage proper activity with a view to developing the child's individuality and independence.

The activities of a child may fittingly be likened to the unfolding of a flower. Each act constitutes

a petal of life. Crush it or remove it from the child nature and we possibly produce an imperfect individuality, as readily as the plucking of the petals from the 'unfolding flower produces an imperfect bloom.

No better opportunity of noting the ability of the untrained teacher to cope with discipline is offered, than that of watching a normal graduate on the first day of her career, as a teacher in charge of a school. To this teacher every spontaneous act of the pupil is a violation of her conception of right discipline. Down comes the cruel master — suppression. Years of teaching, however, lead this same teacher to recognize the futility of such a system. She learns that each pupil is an individual, different in countless ways from any other; she learns that she must carefully study each mind before her, that she must encourage many and hinder few of the actions of the young minds; in other words, she must call into use all her acquired knowledge of experimental psychology and resort to it every day. Nothing save observation and experiment can provide the teacher with the proper equipment for the enforcing of right or true discipline.

Teach the child that order and regularity are necessary to the welfare of the others, that minimum noise on the mechanical movements is something to be proud of. By such means one soon has the pupils moving in a quiet and orderly manner, not because of a law which demands such a method of moving, but because of the pride they take in so moving and acting. The teacher who secures discipline through the least imposition of fixed rules or regulations, has invariably secured the right kind.

Next to the liberty of the child we should consider his independence. Freedom implies independence and thus following our idea of liberty for the child we must allow him the maximum independence compatible with the collective interests of the school. Most of us are prone to depend in some degree on others, but he who is least dependent derives the greatest feeling of freedom as a result. Then as teachers we are to instill the idea of independence into the child. Teach him to solve his own difficulties without continuous resort to the teacher. By catering to his every call for aid, we suffocate an inborn activity, which unless freely exercised soon may become latent and useless to the child.

We may summarize that all true discipline should primarily hold liberty and independence in the foreground. Each of these attributes of the child's nature must be instilled with due regard to the collective interest of the school. Associate all mechanical movements with the idea of pleasing appearance and beauty. Never crush the youthful endeavor to help oneself. Observe closely the unfolding of each bud of life, and adapt measures of discipline to serve each individual. Only by the using of such methods can we fulfil our duty towards the child and the state by laying the foundation for a future generation of strong, incentive and resourceful men and women.

Sympathize with the children; they need your sympathy, they crave it. Their trials and difficulties are as important to them as are the burdens of daily life to their elders. Teachers and parents too often forget this fact and allow themselves under troubles of their own, to become cold and unsympathetic. Childhood needs love and sympathy as the plant requires sunshine. The teacher who finds it necessary to be severe in order to maintain discipline belongs to a passing generation of pedagogues.

Last of all, teachers in the country be happy. It is your great privilege to get close to the people and your pupils. Impress your own standard on the community and set yourselves to looking for kind hearts, high principles, courage, patience and self-sacrifice. You will find them and you will be helped as much as you will help if you take the true spirit.

Do not be in a hurry to get away to a larger place, but get what bit of experience you can in your present surroundings, and when you go leave a circle of warm friends behind you.

CURRENT EVENTS.

The United States Supreme Court has decided that boycotting is an unlawful conspiracy in restraint of trade, and that individual members of an organization that boycotts are liable for three times the damage the boycott may do to those against whom it is directed. The principle involved is that while an organization may have every right to take concerted action for the benefit of its members it has no right to injure others.

The Antarctic exploration party under Sir Ernest Shackleton left South Georgia last month on its way to the Antarctic Continent. They will visit the unknown regions, instead of following the trails of Scott and Amundsen.

The latest reports from our Arctic coast have brought no further tidings of the Stefansson expedition. Stefansson and ten others of his party have now been missing for about a year; and it is now proposed to send out a relief expedition equipped with flying machines, in the hope of finding them.

Figures show that in America, of every four million persons travelling by railway, one is killed; and that this is eighteen times as many as are killed on the railways in England, in proportion to the number carried.

The last rail of the Canadian Northern line between Lake Superior and the Pacific Coast was laid last month, and before many months the ballasting will be completed. There is yet an uncompleted link in this system north of Lake Superior; but we may expect that before very long all three of the transcontinental railways,—the Canadian Pacific, the Grand Trunk Pacific and the Canadian Northern,—will be in operation from coast to coast.

One of the worst earthquakes known in modern history occurred last month in Italy. It is estimated that forty thousand people were killed, and as many more injured. Fifty or sixty towns and villages in the centre of the kingdom were destroyed. In the city of Avezzano, which had twelve thousand inhabitants, three-fourths of the number were killed, and a majority of the survivors injured. Yet this frightful loss of life seems but a trifle, when we compare it with the number of those who have lost their lives on the battlefields of France and Belgium and Poland, since the war began.

Six months of the Great War have passed, and, except for the early success of the Germans in overrunning Belgium and northern France, neither side has won any great advantage. Perhaps not military force, but economic pressure, may finally decide the conflict. Germany's commerce is interrupted by the superiority of the British fleet. The German government has found it necessary to seize all the supplies of wheat in the country, and will probably take over other food supplies. They claim, however, that they have food enough to last until the next harvest, even if all foreign supplies should be cut off. Another serious shortage for them is in the supply of oil, as the part of Galicia which yields that product is now in the hands of the Russians.

France, it has been said, is fighting to save her territory; Russia is fighting to preserve her national life and her religion; Germany is fighting to impose her order on the rest of the world, for she really believes that her government is the best in the world; Britain is fighting for disarmament and universal peace.

While the winter has not stopped the war, it has, of course, seriously interfered with military operations. Lord Kitchener is reported to have said that he does not know when the war will be over, but it will begin in May. At different points along the western battle line, where both armies are entrenched, the French have made slight advances; but the Germans have driven them back at Soissons, and are now within a short distance of that important city. Where the British hold the line, in the vicinity of Ypres, several violent German attacks have been repulsed. A second British army, in which the Canadian troops are included, has been landed in France,

where they may be ready to meet the Germans if they should attempt to make another advance in force before the winter is over.

The part of the battle front held by the British extends, but a fifth of the whole distance between the Swiss frontier and the coast; yet both the French and the Russians are satisfied that Britain is doing her full share in the war, at sea and in the field. A French writer says: To find men, and even to train them, is nothing; but to officer and equip them, while keeping General French's army in ammunition, while working for the Belgian army that has lost all its arsenals and revictualing centres, and for the French army that has lost its chief industrial departments, that is a giant's task, of which England alone is capable.

A new phase of the war is to begin in the spring, when Lord Kitchener will have a new army of two million men in the field; when the French also will have new forces of more than a million; and when, it is probable, more than one of the neutral nations will have entered the war on the side of the Allies; but it will be a very difficult task even then, to drive the Germans out of Belgium.

Another field of war in which colonial troops are employed is on the Egyptian frontier, where the advancing Turkish forces have reached the Suez Canal, though not in large numbers, and have been defeated in a battle in which the New Zealand contingent had its first engagement.

The Germans are said to consider this chiefly a war against Great Britain, but to the people of Eastern Europe it is a war between Russia and Germany. Along the Russian frontier, unchecked by winter weather, the fiercest fighting of the war thus far is now in progress. Winter, indeed, seems to be of some advantage to the Russians; for the freezing of the lakes and marshes which form the natural defences of East Prussia has opened a way for a Russian invasion in the north. The second attempt of the Germans to capture Warsaw seems to have failed; and in the south the Russian armies have taken possession of the most important passes of the Carpathians. Yet the Germans seem to have men to spare for strengthening the Austrian forces for another invasion of Serbia. The winter campaign between Turks and Russians east of the Black Sea has apparently ended in a decisive victory for the Russians.

Another raid upon the English coast was prevented by a battle in the North Sea, in which four of the largest German ships were met and defeated by five large British vessels of the swiftest type. One of the German ships was sunk. It is the first time in history that ships of this size have ever met in battle.

Fifty-seven natives of Fiji have recently passed through Montreal on their way to England, where they expect to enlist in Kitchener's army.

More than eighteen thousand dollars in money has been contributed to the Patriotic Fund by the Indian tribes of the Dominion, and a considerable number of the Indians have enlisted in both first and second contingents.

The Dominion Parliament now in session will probably take measures to raise a hundred and fifty million dollars in war taxes. This will help us to realize that it is our war, and not one at which we are mere onlookers.

A German named Werner Horn has been arrested in Maine for attempting to blow up the railway bridge at

Vanceboro. He pretends to be an agent of the German authorities, and claims that the crime was an act of war. The Canadian Government has asked for his extradition.

The rebellion in South Africa is practically over, and the Union forces may safely proceed against the neighboring German provinces. German Southwest Africa will be annexed to the Union.

It is believed that the continuance of the fighting in Mexico is principally due to the failure of Carranza to settle the land question. Both Villa and Zapata would confiscate the great estates and divide them among their followers. Latest rumours indicate that Carranza is again in power in the City of Mexico, while Zapata has retired to the south, and Villa will possibly become an independent ruler of Northern Mexico. This means the breaking up of Mexico into two, and possibly into three or four smaller states.

A German proclamation states that on the eighteenth of this month the waters surrounding the British Isles will be declared a war zone, and all trading vessels found there, including neutral vessels, will be sunk by submarines. A blockade by submarines is something new, though quite in line with the terrorizing plans of German warfare; but it remains to be seen whether the neutral nations will submit.

SCHOOL AND COLLEGE.

An Officers' Training Corps has been established at Acadia University. Their drill began on December 21, under Sergeant Major Long, who was appointed by the Militia Department.

The Acadia Bulletin for January has a list of fifty-three Acadia men who have enlisted.

The cadet corps of St. Anne's College, Church Point, N. S., have the honour of winning the Grand Imperial Challenge Shield for shooting. 516 cadet corps in different parts of the Empire competed for this prize, which was won last year by an Australian corps. A bronze replica of the shield will remain the property of the college. Ten silver medals and £15 were also won by this corps. The presentations of the prizes were made on January 19, by Dr. A. H. MaKay, Superintendent of Education, and J. A. McDonald, Esq., of Halifax, each of whom made interesting addresses, congratulating the college on the efficiency of its training.

The short course at the Agricultural College, Truro, N. S., began on Tuesday, January 5, with two hundred in attendance.

At a Christmas concert, the pupils of the school at Kemptville, N. S., under the superintendence of their teacher, Miss Lizzie Vine Hatfield, raised \$16.00 for Red Cross work.

The teachers and students of Kentville Academy recently contributed nearly sixty dollars to the Belgian Relief Fund.

Mr. Harry McCleave of Stewiacke has been elected Rhodes Scholar for 1915 by the Senate of Dalhousie University. Mr. McCleave received his early education at Fort Ellis School and Colchester Academy.

The University of Mount Allison has offered a \$50 scholarship for competition in Grade XI of the Parrsboro High School. This school has now \$150 in scholarships, and more than \$100 in prizes for competition in the coming year.

The examinations for the Macdonald scholarships for short courses in engineering at the Technical College, Halifax, were lately held in New Glasgow. The scholarship for the sons of industrial workers was won by Clarence M. MacKay of New Glasgow. James F. Kelly of Stellarton won the scholarship for the sons of railway workers, and the scholarship for the sons of miners was awarded to Donald McAskill of Stellarton.

To fill the vacancy created by the death of Miss Laura Lathern, late teacher of English and Latin at the Ladies College, Mount Allison, Dr. Campbell has secured the services of Miss Dora E. Faulkner, daughter of Hon. George E. Faulkner, of Halifax. Miss Faulkner is an honor graduate in English of Dalhousie College and has taught in the Ladies' College at Halifax.

In connection with the Agricultural short course in the Fisher Vocational School, Woodstock, N. B., there is going on a series of evening lectures on subjects of general interest, illustrated by the reflectroscope. Among the lecturers we notice the name of Miss Hazel Winter, Supervisor of Women's Institutes.

The Board of Education of the Diocesan Synod of Fredericton report an attendance of sixty-eight at the Rothesay College for boys, the largest attendance in the history of the school.

The fine new school building in Smythe Street, Fredericton, was opened in January.

The Art Club of St. John, N. B., is carrying on an Art school. Classes in drawing and painting are held on Monday, Tuesday and Friday afternoons, and Saturday morning. The Club has received a grant from the Royal Canadian Academy of Arts, of \$100, to be used for the benefit of advanced classes in life study.

A number of important changes have been made in the teaching staff in St. John. Leave of absence has been granted to Mr. Charles Lawson, teacher in grade eleven at the High School, who has volunteered for foreign military service.

The Board has received the resignation of Mr. William H. Parlee, Principal of Centennial School. Mr. Parlee has been on the teaching staff of this city for about thirty years, and during that time his services have been of a very valuable nature.

Mr. Grover Martin, of the tenth department of the High School, has been promoted to grade eleven to take the place of Mr. Lawson during his absence. Mr. Arthur W. Hickson has been transferred from the High School staff to the principalship of Centennial School, in place of Mr. Parlee. Mr. Stuart Henry has been transferred from King Edward School to grade ten, High School. Mr. John R. Gale, who formerly taught in Alberta and British Columbia will succeed Mr. Hickson at grade nine, High School. Miss Elizabeth Adams, of King Edward School, has been appointed to take Mr. Henry's place at that school.

At Albert School, Miss Beulah Knowlton of grade one, Centennial, has taken charge of grade one, in succession to Miss Gregory, who has resigned. Miss Emma Babbitt, assistant teacher, succeeds Miss Thompson of grade two, who has resigned to accept her pension. Miss Thompson has taught in the city for over thirty years. Miss Gladys Shaw, a graduate of the High School, who holds a first class license, has been appointed assistant teacher.

At St. Peter's Girls' School, Sister Adrienne has been appointed to take Miss Hogan's position, the latter having retired.—*St. John Globe*.

BOOK REVIEW.

Britain's Case Against Germany, by Professor Ramsey Muir, Professor of History, Manchester University, Manchester, England, is the title of a book recently published by Messrs. Longmans Green & Co., London, and New York. It contains about 200 pages, is bound in cloth, and sells at \$1.00 net.

The author sets forth a strong case for Britain in six chapters, designated as follows: I, The Summer of 1914; II, Germans Political Theories; III, The Two Germanies; IV, How Prussia Rules Germany; V, Recent German Policy; VI, The Alternative to the Doctrine of Power.

The volume is not only a clear, concise, popular exposition of the events immediate and remote, which led up to the war, the political theories advanced by Nietzsche and others, the dominance of Prussia, the war-policy of Germany, and her studious care to avoid all movements, which tended to the settlement of international disputes by other means than an appeal to the sword, but it shows the reader the philosophical side of history, and something of the intricate international problems that have engaged the attention of statesmen for the last one hundred years.

The book has a peculiar value for teachers, and should be read in every Canadian school.—H. G. P.

LOOK IT UP IN HEATON.

Heaton's Annual—the Commercial Handbook of Canada—1915 edition, price \$1.00, postage 12c. Heaton's Agency, Toronto—The eleventh edition has come to hand. Year by year the Annual has been gradually developed to meet the requirements of those who want a Canadian book of easy reference.

The second half of the book contains a concise, up-to-date description of all the towns in Canada of any commercial importance, including the leading hotels in order of merit, the existing industries and special opportunities for new industries. The railway connections, banking facilities and population of smaller places are given under the head of "Banking Towns." To this is added a section covering such subjects as agriculture, commerce, education, finance, fisheries, forests, fox-farming, immigration, mining population, railways, game-laws, water powers, etc., an admirable, up-to-date pocket encyclopaedia of the resources of the Dominion. From a scientific point of view, perhaps the most valuable feature is a chapter headed, "Where to Find it." This is a complete economic bibliography of the Dominion and Provincial Government Reports and standard publications relating to Canada, to which foot note references are given throughout the text.

THE MAGAZINES.

The opening article in the February *Canadian Magazine* is an account of the heroic attempt of Inspector Fitzgerald and three constables to reach Fort McPherson in February, 1911. The writer, A. V. Thomas, calls his story "Heroes of the Canadian Arctic" and draws attention to the similarity between the journey of Inspector Fitzgerald and that of Captain Scott in the Antarctic. The second of the "Famous Canadian Trials" to be narrated is the incident of the assault upon Thomas Walker in 1764, known as the "Walker's ear case." The Library table has a very interesting review of the first twelve volumes of the "Chronicles of Canada." "Tramping in unfrequented Nova Scotia" is a pleasantly written account of a walking trip from Musquodoboit Harbour to Marie Joseph. Six short stories are contributed this month, and the illustrations, as usual, are very attractive.

The Living Age is full of good things, substantial and light. In the latter class "The First Hundred Thousand" tells of some of the ways by which the Scottish element in Kitchener's Army is being shaped into discipline soldiers. "Look here, Dunshie," says the Captain, (to the private who has refused to scrub floors on the plea that he "jined the army for tae fight the Germans"), "glad to hear you want to fight the Germans. So do I. So do we all. All the same, we've got a lot of dull jobs to do first. Coals and floors and fatigues like that; they are your jobs. I have mine too. Kept me up till two this morning. But the point is this. You have refused to obey an order. Very serious, that. Most serious crime a soldier can commit. If you start arguing now about small things, where will you be when the big things come along—eh? Must learn to obey. Soldier now, whatever you were a month ago. So obey all orders like a shot. Watch me next time I get one. No disgrace, you know! Ought to be a soldier's pride and all that. See?" "Yes—sirr," replies Private Dunshie, with less truculence, and is dismissed. The Captain turns to his disciple, "That chap's all right. Soon find out its no good fussing about your rights as a true-born British elector in the army."

We have received the first number of "School and Society," a weekly educational journal, which begins publication with the new year under the editorship of Dr. J. McKeen Cattell, professor of psychology in Columbia University and the Teachers' College, editor of "Science," "The Popular Science Monthly" and "The American Naturalist." The journal will emphasize the relations of education to the social order, scientific research in education and its applications, freedom of discussion, and reports and news of events of educational interest. The first number opens with an article by Dr. Charles W. Eliot, president emeritus of Harvard University, entitled "Educational Evolution." There are departments devoted to discussion and correspondence, quotations, books and literature, educational research and statistics, societies and meetings, educational events, and educational notes and news.—The Science Press, Garrison, N. Y. \$3.00 a year

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THE EDUCATIONAL REVIEW,
St. John, N. B.

New Brunswick teachers will be interested in the announcements on another page, of the Rural Science Summer Schools at Sussex and Woodstock.

The Director of Rural Science for Nova Scotia has issued, in a neat little pamphlet, the first number of the Rural Science Bulletin, to which he asks teachers to contribute suggestions and reports of their experience. The Bulletin has an outline report of the work in Rural Science done in Nova Scotia, mention of some useful agencies in this

work, and suggested nature topics for study at this season. This publication should be very valuable to the schools of the province, especially if the teachers contribute to it as the Director requests.

We wish to emphasize the point, that while our neighbors on the south may ignore the subject of the war in the schoolroom, we may not, for the simple reason that while the United States is a neutral nation, Canada is at war.

We regret that Mr. DeWolfe is unable to furnish his usual timely advice to teachers of nature study, this month.

Two articles on teaching the war appear in this issue. Mr. Vroom's counsel and suggestions will be welcomed by teachers in the higher grades, and we commend to all lower grade teachers the advice in the paper headed "Children and the War," written for the REVIEW by a primary teacher whose pupils are well-taught and happy.

The following anecdote may serve as an illustration in some of the lessons suggested. It was told in a letter from a nurse on one of the ambulance trains in France. She writes: "I cannot speak too highly of the cheerfulness and unselfishness of the men. It is no use asking a man how he feels. He always says 'I'm all right,' though he may have a dozen wounds. One day we stopped at a little wayside station, and saw a Tommy on sentry duty looking very cold. Sister L—— put her head out of the window and said, 'Have you a muffler?' 'No, Sister,' but— taking a very dirty rag of a hanky from his neck, 'take this if it's any use.' He thought we wanted it for one of the wounded. And this is entirely typical of the Tommy. We had the satisfaction of fitting him out with a helmet, muffler, and warm gloves."

USEFUL BOOKS.

CHILD TRAINING.—A system of education for the child under school age, by V. M. Hillyer, head master of Calvert school, New York. The Century Company, 1915; \$1.60 net.

Here is a book that we should like to put into the hands of every primary teacher, and of every mother who is attempting to get her young children into good habits. Intended more especially for the guidance of mothers and untrained teachers, it is full of valuable suggestions for every one who has much to do with children. For the primary school particularly, it furnishes plans for work and play that will brighten many a school day, and prepare the child to take full advantage of later opportunities.

The book contains no new or untried theories. It is practical, definite in its instructions, illustrates freely, and has the confident tone that comes of successful experience. The writer's aim, he tells us, is to produce "children who will be more observant and attentive, with more originality and initiative and sharper wits; who will think and act more quietly, be better informed and more accomplished, more skilful with their hands, more courteous and considerate of others." *These qualities and habits should not be incidental in education; they should be acquired by direct drill. This is the work that should be done.* The italicised words, though not word for word quotation, express the distinctive contention of the author.

By far the greater portion of the book is given to showing the practical application of the principle that qualities are to be developed and habits acquired by drill. General instructions take up about eighteen pages. These deal with the routine and method of training, the question of punishments and rewards, and the acquisition of speed and concentration. Then follows a number of programmes, adapted for both home and school work, for the individual child, and for small or large classes.

Part II. will be most interesting to the primary teacher, containing, as it does, details of habit drills. The first drill is for obedience, first to the simplest orders, sometimes to be obeyed by imitation of the teacher. Terms of direction are taught. Then come drills to teach obedience and attention. The orders are given quietly and not repeated. Deferred orders drill for obedience, attention, and memory. A

list of orders is read; *e. g.*, John, shut the door. Mary, open the book. Harry, walk to the desk, Jane, pick up the pencil. After the list is read, each child is expected to obey his or her own order, without asking to have it repeated. Negative orders involve training in another habit. The order is given, "Don't look round," and the teacher makes noises behind the children to test their power of self-control. In connection with this, Mr. Hillyer notes that teachers are often told "Don't say *don't*", "but inhibition—which is the suppression of desire to do the forbidden thing—is an important habit to be cultivated, and though it is perfectly true that the unfamiliar, the unlikely to happen, is as a rule best left unmentioned, nevertheless, for purposes of discipline, practice in obeying negative commands is highly important, as most laws, from the Decalogue down, are prohibitions, "Thou shalt not."

Another drill is on obedience to orders involving judgment; *e. g.*, "Close the window." The child must not ask which window to close, but must think for himself which window is letting in rain or a cold wind. "Bring me my hat." The child must not say "Where is it?" but find it; and so on. Other drills are on carrying messages, on order and neatness, observation, association and imagination.

Part III. is devoted to story telling. On this subject the writer has sound and decided views. Among the kinds of stories to be told to children he enumerates: 1. Hero stories, and those that deal with courage, truth and other virtues; these instil ideals. 2. Fanciful tales, for stimulating imaginations and giving a delight in the world. 3. Humorous and nonsense stories, for helping the child to get fun out of life, and giving him an antidote against dreary over-seriousness. Among stories to be avoided he includes tales that make wrong attractive, and tales of bogies and horrors. He warns us that commonsense (we would suggest also, a sense of humour) is necessary in expurgating stories, and tells of a mother who objected to the nursery rhyme of "Three Blind Mice," on the ground that it taught cruelty to animals. [A more extreme case is that of the children whose nurse was forbidden to say to them "Pussy Cat, Pussy Cat, where have you been?" because it ended with the line about a little mouse being frightened] Mr.

Hillyer is strongly opposed to stories told to convey information. "Informational stories," he says, "are bad from every point of view. Facts about nature are better taught in direct ways. Information spoils a story, and a story spoils information."

Other topics dealt with are: Physical training, rhythmic arts, manual training, free play, information, and the beginnings of reading and writing; and all are treated in the same practical and definite way.

We once heard the head mistress of a large English school say that as far as she could see, it made little difference to their later life whether children were well trained or not; you could not tell how they would turn out. "The difference it *does* make," she went on, "is that an untrained child is a nuisance to everybody about him, and a well-trained child is a pleasure." Mr. Hillyer aims in his methods of training to produce not only future, but present results; to train children so that they will be "a joy to be with, and a delight to have with you, and equally important, a joy to others as well." The application of them cannot be made mechanically; they call for accuracy, patience and judgment in the parent or teacher. But we are confident that they will give more satisfaction and pleasure, both to teacher and child, in their present use, and also lay a much firmer foundation for future work, than some of the modern systems so loudly advocated.

As far as we know, this book has not yet been published in Canada. We hope that a Canadian edition will soon appear, and become widely known.

TENNYSON'S "PRINCESS."

QUESTIONS BY A. CAMERON.

1. Some annotators say that Aglaia is two years old. Cite the passage on which they ground this opinion. Study all the passages where she is mentioned, and compare such a child with any two-year-old child of your own acquaintance.

2. What is meant by saying that "the child is the heroine of the story?"

3. What poetic (or other) paraphrases are used in the poem for these: Women's clothes, kind acts, chimney-smoke, flattery, honor, fame, the future, mathematics, glaciers, aurora borealis,

Orion's belt, Zenobia, Cupid, Deborah, Pindar, Egeria, over the whole earth, the capital of a country, spray, the new moon, full moon, eager students, angular writing, fetch the grub?

4. Lilia says:

"I would make it death
For any male thing but to peep at us."

Quote and comment on all passages which show that Ida was nearly, but not quite, as intolerant as this.

5. What were the fundamental faults in Ida's scheme of female education? If you can, embellish your answer with quotations from some other of Tennyson's poems.

6. Compare Ida's curriculum with that imposed on our schools.

7. Compare the science teaching at Ida's college with that of the Institute in the Prologue.

8. What bearing have the songs between the cantos on the motive of the poem?

9. Show that the poem is "a Medley" both in matter and style.

10. "Jewels five-words long." Complete the passage and quote from the poem a dozen other examples of what it describes.

11. Summarize and discuss the opinions on the woman question expressed by the prince, his father, Arac, Cyril, Ida and Blanche.

12. Quote and comment on passages that seem to indicate the location of Vivian Place. (Where is it really? How do you know?).

13. What is there in the Prologue which is like the poem itself?

14. There are two phrases in the poem peculiarly applicable to the conditions in which candidates should be when they go up to the provincial examinations. Find them.

15. "The songs, the whispers, and the shrieks of the wild woods." Whence come these three different sounds? Where are they heard separately, and when shaken together? Are you answering from observation, or hearsay or reading?

16. Quote some passages to illustrate the poetic (and primitive) method of indicating (a) time when? (b) time how long? (c) era.

17. In one of the cantos "blood" is called "death" at one time, and "life" at another. Point out the special fitness of the term in each case.

CHILDREN AND THE WAR.

Just how shall we take up the discussion of the present great world war with the children of the lower grades? This is the problem that confronts the primary teacher to-day. Well we know that the subject must be discussed, for the little ones are just as interested in the war news as their elders. Like their elders, they have gathered miscellaneous items bearing on the subject from various sources, reliable and otherwise, and are burning with the desire to communicate said items to their school-mates, and particularly to the long-suffering teacher.

Our neighbors to the south, in some localities at least, have decided that the subject may well be ignored in school, as savoring of militarism. We cannot agree with them. On the contrary, every teacher must see that here is the opportunity of a life-time, no matter how deplorable the facts leading up to the event, to show children just how history is made and how the outcome of great wars influences the map of the world.

Even the smaller children are getting a better idea of the map of Europe to-day than they would ordinarily obtain in years of study. Apropos of this, a pupil in grade IV, not a brilliant one by any means, in fact quite the contrary, after poring over "Highroads of History" for some time, raised his hand and announced, "The Battle of Waterloo was fought in Belgium too." That one fact gleaned for himself meant more to him than dozens of parrot-learned sentences, and he had found it out because Belgium to-day is to him more than merely a name.

Such phrases as "neutral nation," "war zone," "contraband of war," "mobilizing," etc., are becoming more than empty phrases. They convey definite ideas, and can be used intelligently by these same children.

As to the relation of colonies to the Motherland, surely no generation of school children ever had a better opportunity to see a practical illustration of that relationship and its value, than the children of the British Empire to-day!

To go back then to the beginning: It will be wise to set aside a part of our "morning talk" period to the discussion of the war. (The wisdom of this course is seen after one has been electrified in the midst of a spelling lesson by some startling

item of news anent the Germans). At the very outset, the children should be given a clear and concise account of why The Empire is at war. The late Lord Roberts has put it very simply for them in his message, "Children of the Empire: Why are we fighting? Because the British Empire does not break its promise nor will it allow small nations to be bullied."

Let the children see that we are not blindly upholding the Empire in any course, bad or good, but that Britain took the only honorable course open to her, and it is for just this nice sense of national honor that her colonies love and respect her to-day.

As to the items of war news related by the children, let us pass as lightly as possible over the horrors of the war, and this is the part they will love to magnify and want to dwell upon, let us discourage the spirit of flippancy and braggadocio and anything savoring of hatred of the German nation as a whole.

Let the children understand that it is the spirit of militarism in the Germans which we deprecate and are endeavoring to combat, and not any personal hatred to the German soldiers themselves, many of whom are fighting with the same spirit of patriotism as that which actuates our own soldiers.

Valor and patriotism we expect in the British soldier and we cannot help emphasizing these as national characteristics, but let us by simple anecdotes of the war try to emphasize also some other qualities which our boys in khaki are displaying every day:—unfailing good nature under petty discomforts; the unselfishness which forgets personal danger in helping others, and which puts honor before expediency; chivalry to women and children and humane and brotherly treatment of a foe,—all these may well find ample illustration in stories of the war.

Help the children to become acquainted with the leaders in this great struggle:—the strong silent Kitchener, Admiral Jellicoe, General French, General Joffre and the heads of the warring nations. Bring to their notice the work of the Red Cross and Purple Cross Societies. Read to them the best of the poems on the war, Kipling's "Hymn Before Action," and his tribute to Lord Roberts. Show them why Lord Roberts was great and how this tribute sums up the man.

"Clean, simple, valiant, well-beloved.
 Flawless in faith and fame
 Whom neither ease nor honors moved
 A hair's breadth from his aim."

Kipling's Recessional too can most fittingly be talked over in this crisis of the world's history, and the attitude of the Empire to the "God of our Fathers" noted. In this way, we may to a certain extent offset the horrors of the war by giving to the children a sane, honest and healthy outlook on the subject.

SPELLING — WITH THE BEGINNERS.

By ETHEL J. COSSITT.

The writer of this article found herself not long since, in charge of a little miscellaneous country school in a remote section, where a long succession of untrained teachers had deprived the children of the help of modern methods in acquiring the art of reading and spelling.

Many of the children were not of English parentage, and to them the letters of the alphabet had apparently no connection whatever with the sounds of the words which they spelled.

This was seen as far up as grade IV, but of course more markedly in the younger grades, to whom the letters r-e-d, would as likely spell blue or green, as the word to which they are generally conceded.

Work was begun with the youngest class. These children knew the names of the letters, and without any particular phonetic drill they were started at word building.

One of them knew that a-t, spelled at. With this word as a foundation, they were given the following list, which they were taught to spell and pronounce distinctly, the class being drilled individually and collectively.

-at	f-at	s-at.
-bat	h-at	t-at.
c-at	m-at	v-at.

As far as possible, little drawings, placed beside these words on the blackboard, helped the children to remember the pronunciation, and words and drawings were copied as desk-work.

When this list was mastered, which was very soon, they were introduced to the a-n family with drill as in preceding list.

-an	s-an	p-an.
b-an	f-an	r-an.
c-an	m-an	t-an.

The -ad family followed as:

-ad	l-ad	m-ad.
b-ad	h-ad	p-ad.
d-ad	f-ad	s-ad.

Others followed in swift succession as:

-in	f-in	t-in.
b-in	k-in	s-in.
d-in	p-in	w-in.

-it	h-it	p-it.
b-it	k-it	s-it.
f-it	l-it	w-it.

-ed	n-ed	T-ed
b-ed	r-ed	f-ed.
l-ed	w-ed.	

-en	f-en	p-en.
b-en	h-en	t-en.
d-en	m-en.	

-ot	h-ot	n-ot.
d-ot	j-ot	p-ot.
g-ot	l-ot	t-ot.

-un	n-un	s-un.
b-un	p-un	t-un.
d-un	r-un	g-un.

With these lists they had got all of the short vowel sounds, and most of the consonants. They were encouraged to listen for certain letters in words, and when they could spell a new word for themselves, which they could soon readily do, they were very proud.

The sounds of some of the letters were especially noticed, such as the roar of r, the hiss of s, and the panting of h, but for the most part the sounds were left for their ears to detect.

While the youngest class was struggling with beginnings, the older grades became interested, and requests for permission to make the a-t or the a-n family became quite frequent, each child trying to find the most words in any certain family, till a marked improvement in spelling was noticed in all the grades.

After the very simple words were mastered by the beginners' class, the old groups were reviewed, with less well known and more difficult words added, such as: that, flat, chat, bran, than, sled, shed, fled, them, when, etc.

Then words of more complex foundation sounds were introduced as:

-ick	w-ick	st-ick	br-ick.
t-ick	s-ick	sl-ick	qu-ick.
D-ick	l-ick	th-ick	cl-ick.
p-ick	r-ick	ch-ick	fl-ick.

and

-ing	r-ing	br-ing.
d-ing	k-ing	str-ing.
s-ing	w-ing	sw-ing.
	th-ing	sl-ing.

Then followed groups of words having the long vowel sounds, the effect of the final *e*, being noted thus —

-ake	r-ake	fl-ake.
b-ake	s-ake	sh-ake.
l-ake	t-ake	sn-ake.
m-ake	w-ake	st-ake.

and

-ine	l-ine	v-ine.
d-ine	n-ine	wh-ine.
k-ine	p-ine	tw-ine.
w-ine	sp-ine	sh-ine.

Groups were developed also from the sounds, -ate, -ite, -ight, -ill, -ell, -ink, -ay, -old, -ood, -ook, etc.

These spelling drills were carried on for about ten minutes each day, and altogether apart from the regular reading and spelling lessons.

Perhaps some new word introduced in the day's reading lesson would furnish the base for a whole group of words.

For instance the -ick family grew out of the sentence "May I pick you?" pick being a new word to the class. Similarly, the word "best" in, "She likes you best of all the flowers," suggested:

-est	n-est	w-est.
b-est	p-est	ch-est.
j-est	r-est	qu-est.
l-est	t-est	z-est.

One advantage of this method of word drill is that a teacher needs no Normal College training in order to carry it out successfully, and a young teacher with little or no knowledge of phonetics may see great improvement in her classes through its use.

Notwithstanding all said to the contrary, the great majority of words have a strong suggestion of their spelling in their pronunciation, and continued word drills enthusiastically carried on, will work wonders with the most unpromising classes.

HINTS FOR MARCH AND APRIL.

With the spring months comes restlessness.

"When that Aprille with his schowres swoote
The drought of March hath perced to the roote.
Then longen folk to gon on pilgrimages."

So wrote Chaucer five hundred years ago, and it is still true. When the brooks begin to run and we get the smell of earth, we want to do and see something different.

In the schoolroom this spring feeling shows itself in fidgets and slackness about work. And yet it is just at this time that the teacher begins to realize how much has yet to be done, how little time of the school year remains, and that every minute must be made to count.

Do not repress the fidgets too sternly, but try to give the restlessness a vent in frequent marches and simple physical exercises, with plenty of fresh air in the room; and give what relief from monotony you can without neglecting regular work. A very little variety means a great deal to a child. A change of seat, a rearrangement of the time-table, a new plant or picture in the room, changes in the opening exercises, in the order or manner of dismissal, or of forming classes, or going to seats — any of these may add a little interest and freshness. We have been in schoolrooms where the Christmas decorations were still in place in June, and where the same drawings or stencilings stayed on the board the year round, betokening a lack of interest on the part of the teacher. Have some pleasant little change in the room to greet the children after the Easter holidays, if not before.

Reviews of the work done through the winter may be made interesting by different devices. Some suggestions for reviewing history lessons are given in another column. Where a class is weak at some particular point in arithmetic, spelling or grammar, for instance, invent or adopt some stimulating little competition, and offer a trifling reward, such as half an hour's story-reading, a new game taught at recess, or dismissal of the class a few minutes earlier.

Colds are so common in spring that a morning talk might be given on their prevention and cure, and on good manners in connection with coughing, sneezing and use of a pocket hand-

kerchief. Children always long to leave off heavy winter clothing, so discuss the old sayings:

Till April's dead, change not a thread.

and

Ne'er cast a clout, till May is out.

Talks about spring should be kept as closely as possible to the children's own observations. Ask the country children who saw or heard the greatest number of signs of spring on their way to school. What are the spring smells? Spring occupations? Spring games?

So many suggestions for seasonable nature-study are offered in the REVIEW that we need only refer to them here. The following references in literature might be studied:

1. Else had the spring
Perpetual smiled on earth with vernal flowers,
Equal in days and nights."— *Milton*.
2. The uncertain glory of an April day
Which now shows all the beauty of the sun,
And by-and-by a cloud takes all away.
— *Shakespeare*.
3. When well-apparelled April on the heel of winter
treads.
— *Shakespeare*.
4. It was not summer yet, but spring; and it was not
"gentle spring, ethereally mild" as it is in Thomson's
Seasons; but nipping spring with an easterly wind, as in
Johnson's, Jackson's, Dickens, Smith's and Jones's Seasons.
The shrubs wrung their many hands, bemoaning that they
had been over-persuaded by the sun to bud; the young
leaves pined; the sparrows lamented their early marriages;
the colours of the rainbow were discernible, not in floral
spring, but in the faces of the people whom it nibbled
and pinched.— *Dickens*.

Suitable poems are:

The First Mild Day in March.— *Wordsworth*.

*Lines Written in March.— *Wordsworth*.

Home Thoughts from Abroad.— *Browning*.

*March.— *Bryant*.

*The Robin.— *Whittier*.

Early Spring, 1st four verses.— *Tennyson*.

Sir Lancelot and Queen Guinevere, 1st two
verses.— *Tennyson*.

*Spring, from the French.— *Longfellow*.

The word April comes from a word meaning to open.

"I open wide the portals of the spring
To welcome the procession of the flowers."— *Longfellow*.

The customs of April Fool's Day sometimes give trouble in the schoolroom. Where this is likely to be the case, be beforehand with the children by a little talk about practical joking and the dangers of unkindness, rudeness, and sometimes real pain or injury. Put them on their mettle to play no trick that is unkind. Any one can make up a silly story, or unkind deceit, but it takes some cleverness to make a pleasant and funny surprise. If the teacher can illustrate this by inventing a pleasant little April Fool surprise for the class, so much the better. This method is better than a solemn lecture. But if the custom is in abeyance, let it stay there.

Last month we told how to find when Easter comes. Last December the writer heard two men discussing the date of Christmas Day. One said: "It comes about the 24th or 25th." The other said: "I think it's the 25th this year." Children should be taught that while Christmas is a fixed day, Easter is what is called a movable feast, and its date is regulated by the moon. They should also know, as historical facts, why Good Friday and Easter Day are kept, and that they have been kept from very ancient times. The word Easter is found only once in the New Testament. Where is it?

The observance of Flag Day in different places rouses special interest in the flags of our Allies. The French tricolour of red, white and blue in stripes running vertically, *i. e.* parallel to the staff, is a combination of the colours of the city of Paris—red and blue—and the white flag of the Bourbons, and it has been used since the beginning of the French Revolution. The Russian flag flown by merchant ships shows the same colours running in stripes horizontally, *i. e.* at right angles to the staff, and in different order, white at the top, blue, red. The Russian ensign has a blue St. Andrew's cross on a white field. The Belgian merchant flag is like the French tricolour, but with a yellow stripe where France has white, and the Royal Standard has the royal arms in the yellow stripe of the tricolour. Servia's tricolour is like Russia's, *i. e.* the stripes run horizontally, but red at the top, blue in the

Those marked * are suitable for young children and a very successful primary teacher tells me that her grade I children love to learn Browning's "Oh to be in England."

middle. Montenegro's is the same with a crown in the blue stripe. The flag of Japan that we see here is the merchant flag, a red disc in the centre of a white field. The Japanese naval flag adds red rays to the disc.

Hans Christian Andersen was born on April 2nd, 1805. "The Ugly Duckling" and the Proud Apple Tree," The Tin Soldier" are some of the many of his charming stories that are suitable for this time.

William Wordsworth's birthday is April 7th. He may be introduced to the children through his poem, "March."

The cock is crowing,
The stream is flowing,
The small birds twitter,
The lake doth glitter,
The green field sleeps in the sun;
The oldest and youngest
Are at work with the strongest;
The cattle are grazing,
Their heads never raising;
There are forty feeding like one.

Like an army defeated
The snow hath retreated,
And now doth fare ill.
On the top of the bare hill,
The ploughboy is whooping — anon — anon.
There's joy in the mountains,
There's life in the fountains,
Small clouds are sailing,
Blue sky prevailing;
The rain is over and gone.

We can hardly imagine a more welcome addition to the wall decorations of a school-room just now, than a copy of the "Daily Mail Flags of the World." This is a chart, 40 x 30 inches in size, printed in full colours, showing the flags of all nations. More than sixty badges of "The Briton Over-Seas" alone are included. But it is not a flag chart only, for it has pictures and diagrams of different types of naval craft, including torpedo boats, submarines, both British and foreign, drawings of various forms of artillery and perhaps most interesting of all, types of air craft, showing the Zeppelin, taube and others. Eight pages of explanatory notes accompany the chart, giving up-to-date information on these subjects.

The chart is fastened into a folder, but could easily be detached and mounted, or it may be obtained mounted on cloth with rollers.

Price in folder, 1s. net. Mounted with rollers, 3s. net. George Philip & Son, 32 Fleet Street, London, Eng.

HISTORY REVIEWS.

B. C. 55.— A. D. 1216.

1. Give the dates of the kings from William I to John.

Learn:

First, William the Norman, then, William, his son, Henry, Stephen and Henry, then Richard and John.

2. Between the first and eleventh centuries, people of what different nations came to the country that we now call England? From what different countries did they come?

3. Write from two to five lines about each of the following: Julius Caesar, Caractacus, Boadicea, Columba, Dunstan, Godwin, Hereward the Wake, Lanfranc, Prince Arthur, Stephen Langton.

In writing a little paragraph like this about a famous person, tell (a) what their position or profession was, *e. g.*, a queen, a priest, a general; (b) their nationality; (c) when they lived. If you do not know the dates of the lives, tell the century, the reign, or name some events that took place while they were living, *e. g.*, at the time the Danes were invading England; (d) the important thing of all is to tell what they did that makes them interesting or worthy of remembrance.

4. What is a treaty? What facts about a treaty is it important to know? The people who made it, the war, or dispute that was ended by it, the date, and what was agreed to by it.

State these facts about the Treaty of Wedmore (A. D. 878):

5. King Alfred said: "This I can now most truly say, that I have desired to live worthily while I lived, and after my life to leave to the men that should live after me a remembrance of good will." And it was said of him, "There is no king we know of wiser, worthier, or more profitable to his people." Show from your history that king Alfred was "profitable to his people." Was his desire fulfilled?

6. Where are the following places, and why are they mentioned in your history? Iona, Canterbury, Rouen, Westminster, Ely, Jerusalem, Anjou.

7. Name the Danish kings of England and tell in what century they reigned.

8. What was the beginning of the Grand Jury of to-day?

9. What are the two great principles of the Great Charter?

10. Important dates in this period are 55 B. C.; 410 A. D. (Romans leave Britain). 449, 597, (Landing of St. Augustine), 901, 1066, 1096, 1172, 1215. Of what events are these the dates?

11. Write the following topics on separate slips of paper: Let each child draw one, and tell what he knows about his topic. Domesday Book, the Northmen, the Norwegian Invasion, a vassal, a fief, the outlaws of the Fens, the Tower of London, sheriffs, Court of Exchequer, the Flemings, Battle of the Standard, a verdict, the first Crusade.

12. Set a certain number of paragraphs or pages for review, and have each pupil bring two or more questions on them. The questions should be written out and given to the teacher before the recitation. Then each one in turn should rise and put his question. If the class cannot answer, the questioner must give the answer himself.

13. Set a chapter for review and give a rapid fire of questions that can be answered with a name, a date, or two or three words. If possible, have the class take places. A list of names may be given out and each name answered by naming the persons' nationality, position, or the reign or century in which they lived, as agreed upon.

14. Give a list of words from the text book to be defined, and used in original sentences; e. g., supremacy, political, community, monastery, architecture, relics, palisades, vassal, revenue ransom, territory, laity, charter, arbitrary, siege, jury, circuit, homage and invasion.

At French Village, Kings County, N. B., the schoolchildren, under the direction of their teacher, Miss Elizabeth Wetmore, organized a band to work for the different war funds. The boys and girls picked cranberries, blackberries and crab-apples, sold enough fruit to buy sugar, and brought the rest to Miss Wetmore, who turned it into jam and jelly, which sold readily. The money thus earned was voted upon by the children, and divided among the Patriotic Fund, the Belgian Relief Fund, and the Red Cross Society.

WHO, WHAT AND WHERE?

No. VI.

Brothers and Sisters.

1. What sister was separated from her brothers in a dangerous forest, and what "thief stolen" brothers were found in a forest by their sister?

2. Who was rescued from a duel, and afterward threatened with death, because of her likeness to her brother?

3. What two pairs of brothers and sisters in the Waverley Novels met for the first time after they were grown up?

4. Name the persons concerned in the following: *a.* I wad ware the best blood in my body to keep her skaithless, but I canna change wrang into right, or make true that which is false. *b.* She is excellent to be at play with, or upon a visit; but best when she goes a journey with you. *c.*

He spake sweet words, and comforted my heart,
And dried my tears, being a child with me.

5. Name the two sisters in the poem which ends:

There's no friend like a sister,
In calm or stormy weather,
To cheer one on the tedious way,
To fetch one if one goes astray,
To lift one if one totters down,
To strengthen whilst one stands.

ANSWERS TO FEBRUARY QUESTIONS.

1. "She had the essential attributes of a lady — high veracity, delicate honor in her dealings, deference to others, and refined personal habits." Nancy Lammeter, in *Silas Marner*.

2. "The sins of emptiness, gossip and spite and slander." *The Princess*, II.

3. She'll vish there vos more, and that's the great art o' letter-writin'.—*Pickwick Papers*, Ch. 33.

4. Anne smiled and said, "My idea of good company, Mr. Elliot, "is the company of clever, well-informed people who have a great deal of conversation."

"You are mistaken," said he, gently, "that is not good company; that is the best. Good company requires only birth, education and manners, and with regard to education is no tvery nice." *Persuasion*: by Jane Austen.

5. Certainly, it is heaven upon earth to have a man's mind move in charity, rest in providence, and turn upon the poles of truth. *Essay on Truth*.

COMMENTS ON JANUARY ANSWERS.

Three papers received, all good, and one perfect. This month closes the competition. The result will be announced in the April number.

Marks: 10 allowed. M. L. L. Club 10; Jill, 8-; M. V L., 6

TEACHING THE WAR.

J. VROOM.

An article in *School and Society* under the above heading shows the interest taken in the subject among teachers in the United States. In some cities, it appears, they spend from ten to thirty minutes daily teaching the war in the high school grades, though from twenty minutes to an hour a week is more common. One extremist thinks that their schools should teach nothing else until the war is over; while others are opposed to it, the school authorities in at least two cities forbidding all allusion to it, and even dropping all lessons in European geography and history for the time.

We need not pursue the arguments for and against teaching the war in the schools of a neutral country. Here there should be a much deeper interest in its events, and stronger reasons for following them day by day or week by week in the schoolroom. It is our war. Our children are and should be intensely interested in its origin, its progress, and its possible results. Our problems are not whether to teach the subject or not to teach it, but how to approach it, and how much time to give to it in view of the fact that it will not count directly in the results of our final examinations. Every teacher or superintendent who has the responsibility of making a time-table must solve these problems for himself.

Some teachers reserve their most interesting subjects for Friday afternoon, when the regular tasks of the week have wearied the pupils, and the flagging attention needs to be revived. To these the war will furnish topics of most absorbing interest; and some part of that session might well be devoted to summing up the war news of the week. For this purpose, it is suggested that there be a division of the class, each section charged with one division of the subject, it might be with one territorial division of the war zone. One leader or group, for instance, might give special attention to the particular geography of Flanders; know something of the people, their history and their industries; learn what troops are there engaged; follow their movements; collect and care for the maps and pictures needed; look up the pronunciation of proper names; and learn as much as possible of the significance of events

in that region. Another group, perhaps, would take the highlands to the Eastward, and the valley of the Meuse; another, East Prussia and Russian Poland; another, Galicia, the Carpathians and the plains of Hungary; another, the Balkans and the shores of the Adriatic; another, Constantinople and its surroundings; another, the North Sea and English Channel. The information obtained by each section would be discussed before the whole class; and it would remain for the teacher, or for the class as a whole, to determine each week which brought material of the greatest value and described events of the greatest importance.

At other times in the week, the teacher would find occasion for lessons on the general situation; why Germany, Austria and Russia feel shut in, what they want, what other interests are opposed to theirs, the story of Constantinople, the story of the partition of Poland, of the rise of the Russian Empire or of the German Empire, of other events in the history of Europe that bear upon the causes and the issues of the war; lessons on the racial problems, on the forms of government and the conditions of the people in the different countries, on the value of railways and canals in war and in commerce, on the effects of the war upon trade and industry in the belligerent countries and elsewhere. This is by no means an exhaustive list. There are other topics which come within the comprehension of high school pupils, and can be easily brought within the range of their awakened interest at this time, to their permanent advantage!

Perhaps the first thing which most classes need to learn is that we are not called upon to hate and vilify the Germans; but to fight them, and to protect ourselves and our allies and the smaller neutral nations from German domination. The larger neutral nations, if they wish to keep out of the struggle now, may protect themselves later, if Germany should win now for want of their help to oppose her.

Most Germans firmly believe that the German race and character, German laws, and German organization and efficiency, are superior to any other. Though they hate us as their greatest rivals, we can hardly blame them for wishing to extend what they consider the blessings of German rule. If we still prefer our own form of

government, or value the privilege of ruling ourselves, we must fight for it, that is all. The fight may be long and terrible. The war, indeed, is already terrible beyond all other wars. It will not be shortened by reviling the foe.

We need not abuse the Germans for singing,

Deutschland, Deutschland ueber Alles,
Ueber Alles in der Welt;

which, by the way, does not mean "Germany over all other nations," but "Germany above all things, above everything else in the world." It was sung long before there was an aggressive German Empire; when, as one of their statesmen has expressed it, Germany was a geographical conception; and its meaning was that among Germans the welfare of Germany should always be the first consideration—not a very offensive sentiment. Even if some who sing it to-day make it mean Germany over all the world, it is hardly fair for us to object, while we sing, with a very similar meaning,

Rule, Britannia! Britannia, rule the waves,
Fortunately for us, just at present Britannia does rule the waves. It may be that when the war is over neither of the rival empires will be so boastful of its power. The struggle is so momentous that invective is out of place, and even non-combatants need to be cool and determined. If we triumph, as we hope we shall in the end, let it be a triumph without bitterness.

Sober accounts of the terrible deeds that are done by the Germans in pursuit of their policy of frightfulness are not abuse; and there is no need of our hiding facts that are well authenticated, though sometimes the reports of German atrocities may be untrue. That war is horrible, and peace a blessing, is among the most important lessons that we have to teach. And if German culture, which means efficiency and strength of character rather than artistic training, can with deliberate purpose be guilty of such barbarities as have been seen in desolated Belgium and Poland, there is all the more reason for our fighting against it, and trying to make sure that Germany can never again wage war on us. Undesirable as this phase of the war may be, it is impossible to keep it out of the schoolroom.

The means of warfare, the ships and armies, the submarines and airships, the guns, the

training of soldiers, the ways of caring for the sick and wounded, and the meanings of military terms, will interest the younger pupils; and all will take an interest in flags and uniforms and maps.

TO TEACHERS OF UNGRADED SCHOOLS.

Are there boys and girls in your school who want to know many things that you cannot tell them about, flags and guns, and army divisions and air-ships? Would you like to have on the wall, a large coloured chart illustrating these subjects, to which you could send the children for answers to their questions, and which would furnish endless suggestions for geography, history and composition lessons, and for busy work? Are you willing to take a little trouble to get it?

To the teacher who sends to the REVIEW the best *short* account of how to celebrate Empire Day in an ungraded school, we will send post paid, the *Daily Mail* "Flags of the World" described in another column, mounted and ready to hang up.

The account must not contain more than four hundred words, and must reach this office not later than the 20th of April. The best one will be published in the Empire Day number of the REVIEW, which will be issued as early in May as possible.

THE WAR IN "PIDGIN."

War news is much discussed, writes our Kashing correspondent. Tersely put in "pidgin" English, opinions may be summarized thus:

"All foreign man, bad man.

"Japanese, number one bad man.

"English, bimeby, can do.

"French, Russian, no can play.

"German makee b'long fight.

"American talkee too much.

"China-man wait outside.

"All man look-see.

The question "How can finish proper fashion?" is not yet answered.—*North China Herald*.

An old subscriber now in Alberta, writes: I should miss my REVIEW very much if it didn't come. Besides the many helps I get from it, it comes to me as a home letter, as I know and admire personally so many of its writers.

NATURE STUDY OF ANIMALS.

H. G. PERRY.

Coverings of Animals.

Compare the natural coverings of man, ape, horse, cow, sheep, pig, dog, cat, rabbit, porcupine, mink, hen, turkey, turtle, snake, frog, fish, lobster, grasshopper, and earthworm. Add other animals to this list, and name those covered with hair, fur, wool, feathers, or scales.

Of what use is the body covering to animals? Note how it varies from season to season in different animals, and its general adaptation to the life conditions of each.

At what time, or times, of year do animals change their coverings? Name the process in different animals. Why is a change of covering necessary?

What is the difference between hair, fur and wool? To what use is each put in the industrial arts? What is leather? What is the annual value of the fur and wool produced in Canada? Name our fur-bearing animals, and show how the story of the fur-trade is connected with the history of Canada.

What parts of Canada are especially adapted for the production of wool? Name the chief breeds of sheep raised in Canada, and indicate the best wool producers. How is the wool got from the sheep?

What are vertebrate animals? Name those in our list,—the others may be classified as invertebrates. Vertebrata is the phylum or group-name of vertebrate animals, and is made up of several classes, mammalia being the highest. Define the class mammalia, and name the mammals in our list. This is the only class of animals in which we find a covering of hair, fur, or wool. Do they ever have any other kind of covering?

Birds belong to the class aves, and are provided with feathers. Examine a pigeon or fowl for their arrangement, and note that the whole body is not covered, but that they are distributed in lines and patches, called feather tracts. How many kinds of feathers do you find on birds? (See EDUCATIONAL REVIEW, December, 1913, page 133). Note the use of each. What is the special advantage of feathers as a covering?

Compare the plumage of male and female birds, also of young and mature birds.

What part of the bird is not covered with feathers? The scales of the feet suggest a relationship to reptiles.

Snakes, lizards, turtles, etc., belong to the class reptilia. Note the covering of these animals as a class. Why does the snake shed its skin, and how often?

What is the covering of frogs and toads? These animals, with newts and salamanders, are common representatives of the class amphibia. Contrast their covering with that of reptiles, and explain how to distinguish a lizard from a newt or salamander.

Pisces or fishes is the last and lowest class of vertebrates. How are the scales of fish arranged? Note their difference in size and color on different parts of the body. The colors are chiefly due to pigments within special dermal cells, called chromatophores.

Examine scales with a hand lens, and note the star-shaped pigment spots. The simple pigments are either red, orange, yellow or black, but other colors are produced by a combination of chromatophores; for example, yellow and black give brown. Note that colors are usually arranged on fish in longitudinal or transverse stripes. How are the fins colored? On which part of the body are the lighter colors? How do they compare with land animals in this particular?

Fish also change in color with a change in the color of their surroundings, and most boys have noticed some difference in the color of trout from different streams, and at times from different parts of the same stream. Frogs are also subject to similar changes, but the best example of all is the little chameleon, which varies its color almost instantly with a change in the color of its surroundings.

These animals are said to enjoy a high degree of protective coloration. Do other animals have protective coloring? Is it more pronounced in domestic or wild animals?

Study animals in their haunts, and note how different colors and different combinations of colors, serve as protection coloration for different animals:—the toad in the garden, the frog by the pool, the partridge on the ground, the rabbit in the woods, etc., etc. How has it happened that we find each animal clothed in colors best suited to its need? Are the coverings of animals in general equally well adapted

in other particulars to their requirements? Specify particular examples. Point out specific cases of protective coloration among insects, and other invertebrate animals.

Mention should be made of the hard covering of the lobster, grasshopper, and many other similar animals; it serves also as a kind of skeleton, and being on the outside of the body, is called an exoskeleton. Compare this kind of skeleton, with the internal skeleton of vertebrates. How do grasshoppers and lobsters change their coats, and how often? Why is a change of covering necessary? Name other animals that change their coverings in a similar manner.

HOW TO DRAW A FIVE-POINTED STAR.

Here is a novel way to draw that elusive figure, a five-pointed star: Cut a narrow strip from one side of a sheet of ruled paper so that the lines run crosswise. Begin near one end, and number the lines from one to eight; then for convenience in handling, cut off the strip about an inch below the eighth line.

Through the line numbered eight make a pinhole large enough for a pencil point, and put another pinhole in the line marked seven. Fasten the strip to the middle of the sheet of paper by sticking the pin through the line marked one, and hold it perpendicular with the left hand.

Put the pencil in the hole at seven, and draw a circle by carrying the strip round the pin as a centre. Lift the pin, and keeping it in the hole at line one, stick it anywhere on the circumference of the circle; put the pencil through the hole at eight, turn it toward the right, and make a small arc across the circumference. Next stick the pin through the point where the arc crosses the circumference, and draw another small arc as before. Continue to do this, moving always to the right until the last arc falls at the starting point.

Lay aside the strip of paper, and rule lines to connect alternate points where the arcs cross the circumference. The result will be a perfect five-pointed star with a pentagon in the middle.

The explanation is not difficult to understand. The problem was to find the length of the chord that would divide the circumference into five equal parts. It has been worked out by mathematicians that the length of the radius divided by five and multiplied by five and five-sixths

equals the length of a chord that will divide the circumference into five equal parts. In this instance, by putting the pencil at the seventh line, six spaces were taken as the length of the radius. That divided by five and multiplied by five and five-sixths, equals seven spaces, which places the pinhole on line eight.

Any number of spaces may be taken for a radius. For example, if eight are taken, the result will be nine and one-third for the length of the chord.

Since the distance between two adjacent points of the star is one-fifth of three hundred and sixty degrees, the measure of every circumference, the geometry involved is to find the chord of seventy-two degrees when the radius is given, or to find the base of an isosceles triangle when the vertical angle is given and the equal sides are equal to the given radius; or to find the side of an inscribed pentagon when the radius is given.

The trigonometry involved is to find two times the sine of thirty-six degrees when R is given.

— *Youth's Companion*.

In England, some fourteen hundred Scouts have, since the war began, been patrolling the coasts, keeping watch, signalling ships, and generally replacing coastguards now on active service. A motor ambulance manned by expert Scouts has been sent to France. Over three thousand ex-Scouts are known to be with the colors, and officers have abundantly recognized the value of their training and their spirit. The Boy Scouts have offered to raise for service at the front a full battalion of cyclists, provided with machines and of guaranteed proficiency in scouting and despatch-riding. In a less conspicuous but equally effective sphere they have been continuing their peaceful duties as messengers, relief distributors, and general "handymen" for any special call. In the Manchester district alone they have already realized more than £150 for the Relief Fund, by the sale of newspapers which they collect. It was the Boy Scout who, under the fire of the elements, scaled the lamp-posts and advertised with placards the recently raised city battalions. Moreover, they have not slacked off now that the novelty is gone. They still aim at proving themselves in all ways "going at need."— *World Wide*.

MARCH.

The stormy March has come at last,
With wind and cloud and changing skies,
I hear the rushing of the blast
That through the stormy valley flies.

Ah! passing few are they who speak,
Wild stormy month, in praise of thee,
Yet, though thy winds are loud and bleak,
Thou art a welcome month to me!

Then sing aloud the gushing rills,
And the full springs, from frost set free,
That, brightly leaping down the hills,
Are just set out to meet the sea.— *Bryant*.

The wind blows, the sun shines, the birds sing loud,
The blue, blue sky is flecked with fleecy, dappled cloud,
Over earth's rejoicing fields the children dance and sing,
And the frogs pipe in chorus, "It is Spring! It is Spring!"

The grass comes, the flower laughs where lately lay the
snow,
O'er the breezy hilltop hoarsely calls the crow,
By the flowing river the alder catkins swing,
And the sweet song-sparrow cries, "Spring! It is Spring!"
— *Celia Thaxter*.

Whichever way the wind doth blow,
Some heart is glad to have it so,
So blow it east, or blow it west,
The wind that blows, that wind is best.

The Willow.

"Still lie the sheltering snows undimmed and white,
And reigns the winter's pregnant silence, still
No sign of spring, save that the catkins fill,
And willow stems grow daily red and bright."
— *Helen Hunt Jackson*.

The bluebirds chant from the elm's long branches,
A hymn to welcome the budding year,
The south wind wanders from field to forest,
And softly whispers, "The Spring is here."
— *William C. Bryant*.

Crocus.

Welcome, wild harbinger of spring!
To this small nook of earth;
Feeling and fancy fondly cling
Round thoughts which owe their birth
To thee, and to the humble spot
Where chance has fixed thy lowly lot.
— *Longfellow*.

ÆOLUS AND THE BAG OF WINDS.

Æolus (cé-olus), the king of the winds, lived on a rocky island that floated about in the ocean. When Ulysses, the wise Greek, was sailing home with all his ships and men from the siege of Troy, he came to this island and landed. He and his men were very kindly treated by Æolus and they stayed there a month.

When they were ready to go, Æolus gave Ulysses a leather bag tied tightly with a silver string. In this bag were all the unfavourable winds, shut up so they could not blow, and Æolus commanded the fair winds to blow the ships of Ulysses to their own country. For nine days the fair winds blew and the ships flew steadily towards home, and all that time Ulysses stood at the helm and steered. At length he was quite tired out and lay down to sleep. Then his men began to wonder what was in the mysterious bag. They thought it must hold some treasures, so they untied the silver string, and roaring and raging, all the foul winds burst out. They tossed the ships and drove them far from their course and at last brought them back to the island.

Æolus was so angry at the foolishness of the men, that he would help them no more, and they had to toil hard at their oars on the rest of their journey.

BIBLE READINGS FOR OPENING EXERCISES

1. Exodus, i. 6-14.
2. Exodus, i. 22 — Exodus ii. 4-10.
3. Exodus, ii. 23-25 — Exodus iii. 1-6.
4. Exodus, iii. 7, 10, 11, 12, 16, 18.
5. Exodus, iv. 1-9, 27-31.
6. Exodus, v. 1-9, 22, 23.
7. Exodus, vi. 1-11.
8. Exodus, vii. 6-13.
9. Exodus, viii. 20-32.
10. Exodus, ix. 13-15, 18-26.
11. Exodus, xi. 27-35.
12. Exodus, x. 7-15.
13. Exodus, x. 16-27.
14. Exodus, xii. 1-3, 5, 8, 11-14.
15. Exodus, xii. 21-28.
16. Exodus, xii. 29-36.
17. Exodus, xii. 37-42.
18. Exodus, xiii. 20-22 — Exodus xiv. 9-12.
19. Exodus, xiv. 13-22.
20. Exodus, xiv. 23-31.
21. St. Luke, xxiv. 1-9.
22. St. John, xx. 1-10.

THE PINCUSHION DOLL.

Once upon a time there was a pincushion that wished to be a doll. It belonged to the mother of two baby girls whose names were Laura and Mary Anna. Day after day the pincushion saw the little sisters hugging and cuddling their dolls, singing to them, and playing with them from morning until night. The pincushion did not dream that she could be a doll herself until she discovered that almost anything will do for a doll; a doll was sometimes a towel rolled up, or a pillow case, or a little old dress—it made no difference to the babies; they were all cuddled and loved.

When the pincushion noticed that, she began to fidget. She squirmed pins loose, soiled her dress, and untied her bows; she was a long pincushion, with a soft, soft doll heart. She began to tumble toward the front of the dressing table, and she hoped and hoped that the babies would see her. At last the pincushion had her wish.

It was the day of the evening party that Laura and Mary Anna's mother noticed that her pretty pincushion was soiled. "We must wash this pincushion cover and press the ribbon," said she. "Everything in this house must be fresh and spotless."

When mother sat down to undress the pincushion, Laura and Mary Anna stood by her side and watched. The pincushion kept saying over and over in its soft heart, "Oh, let me be a doll, little girls! Oh, let me be a doll!"

Straightway the wonder happened. "Why, it is a doll!" exclaimed Mary Anna, and she ran away for a moment. She came back with the bisque doll's muslin bonnet, which exactly fitted the pincushion's head.

"Now wrap something round it," begged the little sister.

Straightway the pincushion was wrapped in a towel, and became a doll in Mary Anna's soft, round arms. You can understand how happy Mary Anna was, but unless you have been a pincushion you can have no idea how happy the new doll felt as Mary Anna rocked and cuddled it and cuddled and rocked it.

After awhile Mary Anna let Laura hold the doll, and Laura sang kindergarten songs to it, all about the old owl that lived in the tree, the shoemaker, and ever so many others.

At noon, when the little girls went to luncheon, they put the pincushion to bed, bonnet and all. You may be sure that the doll did not sleep, but lay there wide-awake, thinking and thinking what a beautiful thing it is to be a doll.

About three o'clock that afternoon mother began to search for the pincushion. She wished to put on the fresh cover.

So Laura and Mary Anna carried the pincushion to their mother.

Mother had to go to the telephone, and when she came back, the cushion was nowhere to be seen. No one could find it for a long, long time.

You see, the pincushion was trying the magic of hiding in plain sight. It did not wish to be a pincushion again, and that was why it tried the hiding magic. In every room mother and Laura and Mary Anna searched for that pincushion; high and low they hunted; in chairs and under chairs, on beds and under beds they looked, until at last they found it on the arm of mother's wicker rocking-chair.

"It doesn't like to be a pincushion," said the little girls. "It wishes to be a doll."

"That is sad, I am sure," said their mother. "We must grant the wish."

And so ever since that happy day the pincushion has been a doll; it wears a muslin bonnet and a starched plaid gingham dress, and is loved and cuddled by two little girls.
—*Youth's Companion*

5,000 FACTS ABOUT CANADA.

"Know Canada! make Canada known!" is a striking sentence in the War Year edition for 1915 of that popular booklet "5,000 Facts About Canada," compiled by Frank Yeigh, of Toronto, who knows Canada as probably few Canadians do. It is true that he who would know Canada and its wonderful growth in any one year, will find this annual publication "worth its weight in Yukon gold or Cobalt silver," while as a means of making the Dominion known in other countries, it is no less valuable. Fifty chapters are devoted to such subjects as Agriculture, Area, Banking, Census, Immigration, Mining, Manufacturing, Trade, etc., and a page of Canadian War Facts show how up-to-date it is. Sketch Maps are included of the Dominion in 1867 and 1915. Copies may be had from progressive newsdealers, or by sending 25c, to the Canadian Facts Publishing Co., 588 Huron Street, Toronto, Canada.

IRREGULAR VERB GAME.

While the children watch, the teacher performs some action as ringing a bell, sitting down, etc. Pupils then do other things and each tells what he has done, as "I jumped after Miss Carston rang the bell."

"You see," the teacher commented, "before this game is finished, the children have said, 'Miss C. rang' enough times to really begin to make an impression. The beautiful thing about it all is the fact that they say it over and over again without being conscious of the fact that they are made the victims of a good, stiff drill, because it is all done in a game and they are so busy playing. In my room, we play that same little game, all through the year, by simply working in a little variety in conducting it. The little people never tire of it because it gives vent to their inborn love of motor activity. Besides that, every teacher knows that children fairly dote on repetition and never fail to appreciate the pleasure of choosing for themselves. My boys and girls are as free as air. I have even stood by unabashed while they shut all of the windows on a stifling hot day, or turned an elaborate round of somersaults. Of course when I 'do' my share in starting the ball rolling, I always take care to choose a past-tense that has proved to be, as the boys term it, 'a poser.'"

"How do you vary the game?"

"After we have had several weeks of the simplest form, calling for the statement of the teacher's action and the one more of the child's own, the teacher again sets the new pace, by performing several different actions, while the pupils watch carefully as before. These things are all done in the midst of a perfect silence. I am always slow and deliberate in my movements, but I do not allow any time to elapse between the different things I do. When all is finished—I usually begin with three different acts—a child rises and tackles the stiff bit of verb-forming that I have taken pains to place before him. He begins, 'I saw Miss Carston begin our game. She rang the bell, blew the horn and then sat down?'" I insist that the introductory 'I saw' never be omitted although sometimes the statement is shortened to the simple statement, 'I saw Miss Carston,' and left at that. That invariable recurrence of

'I saw' is as powerful as a Gatling gun and by the time this particular form of our game has reached the limit of its usefulness, 'I seen' has long since been relegated to the dim and forgotten past. Later on in the school year, when the children have completely forgotten their earlier timidity and have learned to take the initiative, they are ready for the last form of my game, and here we achieve correct English with a speed that is fast and furious."

"This form, the most complex of all, is a combination of language drill and practice in sense work. It is based upon that well-known little 'silent game,'" in which one child touches one thing, another child the same thing and another one, etc. In adapting the device for use in our verb-form drill, we, of course, make use of as many different forms of action as we possibly can. In the beginning, we take the device and use it just as we did in our sense training work—that is—Johnny touches a picture, Susie touches the picture and then throws a ball, Mary touches the picture, throws the ball and blows out a lighted candle. At the end of Mary's activities, Mary or any one of the three participants in the game, or even some child who has been watching very closely, is asked to tell what was done. He or she rises to say, 'John touched the picture, Susie threw the ball, and Mary blew out the light.' If all of the past forms of the verbs are correct, the speaker is given the privilege of starting the new game, and so it proceeds. As time goes on, another action or two is added until it is not unusual—that is, along toward the close of the school-year—for the children to name correctly as many as eight acts with the names of the children who performed them, also, in the proper order. The hardest form of this device is that in which one child silently and swiftly performs seven or eight actions and another pupil names these acts in their proper order and also tells it all in correct English.—*Primary Education*.

Old subscribers will remember the valuable papers contributed to the REVIEW by the late Principal Cameron of Yarmouth. The questions on "The Princess" which appear in this issue were sent us by one of Mr. Cameron's former pupils.

WINTER RAIN.

Every valley drinks,
 Every dell and hollow;
 When the kind rain sinks and sinks,
 Green of Spring will follow.
 But for fattening rain,
 We should have no flowers,
 Never a bud or leaf again,
 But for soaking showers.

We should find no moss
 In the shadiest places,
 Find no waving meadow-grass,
 Pied with broad-eyed daises.
 But miles of barren sand,
 With never a son or daughter;
 Not a lily on the land
 Or lily on the water.

—C. G. ROSSETTI.

SPELLING.

A chit of a young teacher in a fourth grade room gave to her pupils the familiar spelling blank, then said, "Draw a picture of anything you like, take something from your pocket, or come and get a picture from this box on my desk, and make out a list of the words you need to describe it." One boy took from his pocket the tail feather of an oriole and made a list of thirty words, spelling all but one correctly. Another took a harmonica, etc. The teacher looked over the papers, noting the misspelled words. To John, who had the feather, she said privately when she had the chance, "You did well on that list. You spelled twenty-nine out of thirty words correctly." John was left wondering about the misspelled word. To Mary and Delle she made similar comments when she had the opportunity. Each day she had a lesson of this sort. On Friday she asked, "Who can spell threads?" A boy wrote the word on the board. Everybody looked at it. She asked John to erase, spell and write it, which he did correctly. Then she said, "John that was the word you missed on Monday." In this way she continued with the most important of the words misspelled during the week. No time was spent on dead lists of words that connected themselves with nothing except the spelling book—and the possibilities of the dim future.—*Primary Education.*

CURRENT EVENTS.

The winter is over and the second stage of the war in France is about to begin. There has been continued fighting to hold the lines throughout the winter months, but no great movement in force. The time for such a movement must be near. The Canadians are now on the firing line near Ypres, at which point, apparently, the Germans may make their final effort to reach the Strait of Dover.

Spring weather is opening the way through passes of the Carpathians which have been blocked with snow, and closing winter roads that were opened by the freezing of the swamps and marshes of East Prussia. Between the two extremes lies a war swept territory more than a thousand miles in length, which has been during the winter some of the bloodiest battles of the war. In the battle of the Bzura, which ended on February 4, each side is said to have lost about twenty-five thousand men. In the following week, the Russians were driven out of East Prussia for the second time since the war began; but a sudden thaw broke up the ice of the marshes and prevented the Germans from winning a decisive victory. The Russians are now advancing at all points, and a great battle is expected on the Pilica (pee-lyee-tsah), in central Poland. There is no cessation in the struggle for the mountain passes which lead from Galicia into Hungary.

The attack upon the Suez Canal seems to have been abandoned, but there has been further fighting near the head of the Persian Gulf, in which the Turks were defeated.

The chief event of the month has been the bombardment of the forts at the entrance of the Dardanelles by the British and French fleet which has been sent to attack Constantinople. At the head of this fleet, which is the largest fleet of warships ever assembled for active service, is the new British ship "Queen Elizabeth," carrying eight 15 inch guns. The strait is forty-four miles in length, and from one to four miles in width. The forts that guarded the entrance were soon destroyed, the mines were swept away, and the allied fleet advanced for some distance up the strait to attack the stronger forts at the narrows. Meanwhile it is said that a powerful Russian fleet is approaching Constantinople from the other side. It is expected that the Turks will yield to save the city from destruction.

The German proclamation declaring the coast waters of England and Ireland unsafe for neutral vessels has made little difference in the number of ships sailing from this side of the Atlantic. A few British vessels have been destroyed by German submarines and mines in the proclaimed war zone, and a few neutral vessels sunk in the North Sea. Britain in return will place all possible restrictions on trade with Germany, and has declared all food supplies contraband of war.

British and French ships are blockading the coast of German East Africa.

It has been stated in the Italian Parliament that Austria-Hungary contemplated war against Servia in 1913, but refrained when it was learned that Italy would not join in an aggressive war. This shows that the assassination of the Archduke Francis Ferdinand, which occurred in 1914, was not the cause of the war, but merely a pretext.

At a special convocation of the University of Toronto recently, forty-four soldier students in uniform received their degrees without examination.

Forty per cent of the Students of the Manitoba Medical College have enlisted for service at the front.

Hayti has a new government, at the head of which is President Sam, the successful leader of the latest revolution. The United States will recognize him; and will probably establish a fiscal protectorate, as in Santo Dom-

ingo, by which the customs revenue will be placed in the hands of men appointed at Washington, with due provision for the gradual payment of the foreign debt.

Mr. Lloyd George has said in a public speech that drink is doing more damage to Great Britain than all the German submarines put together, and that the government intends taking hold of the drink question vigorously. In this, Britain would only be following the example of France and Russia.

The condition of affairs in Mexico is far worse than ever before. There is now no recognized government in Mexico city, and it is announced that all the foreign representatives have left.

SLIPS IN ENGLISH.

The following list of words and phrases to be avoided is made up in part from one prepared by a teacher in Wellesley College for the benefit of her students. We have added several incorrect expressions often heard in Canada.

Do not use:—

1. Fix, for arrange, or prepare.
2. Real, as an adverb, for really, or very.
3. Some, any, as an adverb, for somewhat, or at all.

(These two mistakes are becoming so common that careful drill should be given on the proper forms. We have heard teachers at Institutes say, "real busy," "real good." "I have studied the matter, some.")

4. Not as I know, for, not that I know.
5. Plural contracted verb form with singular subject. *e. g.*, she don't, he don't.
6. All the far, for, as far as.
7. The matter of, for, the matter with.
8. Party, for, person.
9. Taste of, smell of, when used transitively, for taste, smell, say taste it, smell it.
10. Feel good, for, feel well.

SCHOOL AND COLLEGE.

The Dartmouth, N. S. schools had an exhibition, principally of Nature-Study work, on February 9. L. A. DeWolfe, Director of Rural Science, who was present, was much pleased with the exhibits.

In Truro, a committee of the Victorian Order of Nurses has engaged a second nurse to do the school nursing in the town.

Pugwash has a new and well-planned and well-equipped school building, which was formally opened on February 4. The chairman of the School Board, Mr. W. F. Sutherland, in his opening address, paid a warm tribute to the memory of the late Donald Macaulay, for twenty years principal of the Pugwash Schools. Addresses were delivered by

Dr. A. H. MacKay, Superintendent of Education, by Inspector Craig and others. The people of the district were congratulated on having such a fine school building and an efficient staff of teachers. Mr. R. O. Pearson is the Principal, with Miss Grace Tabor and Miss Ethel Gilroy as assistants.

On February 16, the Domestic Science Department of Windsor Academy had a reception for the teachers of the staff. After tea had been served by the senior pupils, the Principal of the Academy, Mr. J. Arnold Smith, presented, on behalf of the staff, a purse of gold and an address to Miss N. A. Burgoyne, who has recently resigned her post as teacher, after a continuous service of forty years.

Mr. J. E. Barteau, Inspector of Technical Schools in Nova Scotia, is on a tour in the interests of these schools. Mr. Barteau is visiting New York, Boston, Toronto, Montreal and other cities to inspect the latest equipment and study the newest methods in Domestic Science and Manual Training.

Mr. L. A. DeWolfe, Director of Rural Science Schools in Nova Scotia, has been offered a corresponding post in Saskatchewan, but has decided to remain in Nova Scotia for the present.

On Thursday evening, February 11, the staff and High School pupils of the Hampton, N. B. Consolidated School entertained the teachers and High School students of the Kingston Consolidated School. The graduates and trustees were also invited.

The school house at Ammon, Westmorland County, N. B., was burned to the ground on the morning of February 27. The building was of wood and about twenty years old, but had modern desks, seats and was well supplied with maps and blackboards. There was no insurance.

The class of 138 students at the New Brunswick Normal School, whom Lieutenant A. S. MacFarlane has been instructing in physical training, passed successfully the examination conducted on February 26, by Captain A. H. Borden of Halifax.

An educational event of some importance in St. John, N. B. was the gathering of several hundred women at a meeting of the Women's Canadian Club on February 12, to hear a lecture from Miss Knox, Head Mistress of Havergal College, Toronto, on "Women's Work and School Ideals." Miss Knox spoke from the standpoint of a woman with high ideals, wide outlook, and practical experience, and dealt chiefly with the need in face of the increasing opportunities of women, that our girls should be taught to think clearly, to be trained for personal responsibility, efficiency and self-sacrifice. She made a very strong plea for Scripture teaching in schools.

Ambrose Paoli, aged twenty-two, son of Simon Paoli, of Charlottetown, has been chosen Rhodes' scholar for P. E., Island. Paoli is now a student in Queen's University, Kingston, Ontario. This year he received his B. A. degree. He is now on military service with other students of Queen's in the company commanded by Prof. Alexander McPhail.

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BOOK NOTICES.

Many teachers welcome a picture book which is both entertaining and instructive to lend as a reward to the industrious boy who has finished his work, to keep a restless one quiet in an interval, to brighten a rainy recess, as well as to illustrate a lesson. Such a useful book, at a very low price is *Asia in Pictures*, by H. Clive Barnard, M. A., B. Litt. It has sixty-five illustrations, thirty-two in colors, and gives the children a suggestion of the beauties of the oldest countries of the world. The coloured pictures of scenes in Japan and India are particularly attractive. [A. & C. Black, London. 64 pages. 1s. 6d.]

We have already drawn attention to the series of *Travel Pictures*, published by Messrs. Black, as very desirable for use in geography classes. Three more sets have been issued: *The Mediterranean*, *The British Isles*, and, of great interest at the present time, *Countries of the Great War*. Each set has fifty pictures, half in colours, and a list of problems and exercises. [A. & C. Black, 4, 5 and 6 Soho Square, London. 10d. each set.]

The Economic History of England, by M. Briggs, G. A., Cantab. B. Sc. London, gives an outline of the economic development of England from Roman times to the present day. Separate chapters deal with Scotland, Ireland and London. A very useful hand book for the history teacher. In the chapter on "the Economic Effect of the Great War" (*i. e.* the Napoleonic Wars) the writer admits the extreme difficulty of estimating the effect. The following paragraph has especial interest just now:

"The three weaknesses of economic warfare, whether an aid to fighting, or whether carried on by tariffs in time of peace, are: First, the damage done to the enemy is out of all proportion to the advantage gained, and needless irritation results; secondly, neutrals are nearly always affected, some to their hurt; thirdly, the objects aimed at are never effectively carried out." [University Tutorial Press, London. 508 pages.]

This firm also sends us three volumes of their shilling school Latin Classics: Caesar, Gallic War, Books I and II, edited with vocabulary and notes by D. M. Perm; and Virgil, Aeneid, Book IX, by J. F. Richards.

THE MAGAZINES.

Bird Lore for February contains the results of the Christmas Bird Census which this magazine inaugurated fifteen years ago as a humane substitute for the old Christmas 'Side Hunt.'

From the Atlantic to Pacific, from the Gulf of Mexico to Canada, observers go afield on this day in keen and friendly rivalry, armed not with guns, but with field-glasses. The record 'bag' was made by W. Leon Dawson at Santa Barbara, California. Mr. Dawson recorded 107 species, doubtless a greater number of birds than have before been seen on a single winter day in North America. Five of these reports came from Ontario, and one from Yarmouth, N. S., where seven species and eighteen individual birds were seen on December 29. Every one who is interested in birds will enjoy this number. The Audubon Societies' department is of special interest for the school-room. The Junior Audubon work, suggesting correlation of bird study, reading, drawing, and spelling, and a study of the question of keeping cats are practical articles. Reports from boys and girls are published, and directions given for the right kind of bird-box.

War stories are beginning to abound. There is a charming one in the March *Century*, called "The Way to Tipperary," by Edgar Jepson. In "Arms and the Race," in the same issue, R. M. Johnston discusses the difficulties in the way of disarmament. The Rev. Gavan Duffy contributes a fine article on "The Bondage of Modern Religion." Both the articles and the short stories of this number are above the average.

St. Nicholas for March appeals to young people who like a flavor of history in their fiction. "A Page of Béarn" is a pretty story of the difficulties of Jeanne d'Albret, and introduces the boy, Henry of Navarre. "How the Vicar of Wakefield found a Publisher," is told in the form of a play, by Maud Morrison Frank. The popular serials — Mrs. Burnett's, "The Lost Prince," and "A Maid of Denewood," have interesting instalments. Hildegard Hawthorne in "Books and Reading," deals with Joel Chandler Harris.

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THE EDUCATIONAL REVIEW,
St. John, N. B.

The attention of all our New Brunswick readers is called to the important official notice on page 247, concerning the observance of Empire Day, issued by the Chief Superintendent of Education. The notice on page 248, in reference to physical drill, is also of interest.

To aid in the special celebration of Empire Day in the schools called for by the present crisis, the Women's Canadian Club of St. John, acting with the approval of the Chief Superin-

tendent, propose to send to every teacher in New Brunswick a leaflet containing appropriate selections and suggestions for a programme of patriotic exercises.

The May REVIEW will be an Empire Day number, and the supplement will be a picture of Lord Roberts.

The answers to the last set of questions in the Who, What and Where competition will be found on page 241. The announcement of the results is postponed until the May issue.

Will our readers please note that we do not undertake to send from this office the books that we recommend or notice. We give the publisher, and where possible, the price, of such books, and are ready to supply any information that we can, but not the books. Several times we have had to return money sent to us that should have gone to a bookseller.

The practical life is the life of steady, persistent, intelligent, courageous work, widening its horizon as the worker grows in knowledge, and by doing well what lies before him, fits himself for harder and higher tasks.—*L. R. Briggs.*

Happiness should be the accompaniment of the everyday life of all who are doing good, honest work with an intelligent mind.—*Bishop Creighton.*

Let us consider the letter "r." It is in our alphabet and we are obliged to use it. Why not accept the obligation gracefully and use the letter correctly? If we can spell such simple indispensable words as "modern," "pattern," "northern," "southern," "children," "February," why should we pronounce them "modren," "páttren," "northren," "southren," "childern," "Febuary."—*Karshish.*

NATURE STUDY OF ANIMALS.

H. G. PERRY.

Bird Study.

The following topics or suggestions for the study of birds follow closely the arrangement and questions given in Mrs. Comstock's "Bird Notes." If you are not using "Bird Notes," arrange the suggestions in a note book, and answer them in the field, while the bird is under observation. Give short answers to all questions, similar to those following first question under A. Do not trust entirely to your memory to carry away a true picture of the bird, but whenever possible make a chart, and mark in

11. Note color and shape of its bill.
12. Is the tail forked, notched, square or rounded?

B. Topics for additional study of birds,—

1. Migrations.
2. Nests and bird-houses.
3. Song and calls.
4. Color.
5. Food.
6. Relation of birds to man.

Migration is the most distinctive phase of bird life, and in a discussion of this subject we may, for convenience, group our birds as follows:

1. Permanent residents,—species that are



Fig. 1.—THE KINGBIRD,
a noted insect eater.



Fig. 2.—BIRD HOUSES.

the colors and peculiarities of form. One seldom sees accurately till he begins to record carefully.

A. Suggestions for identification study of birds.—

1. Where is the bird seen? Woods, border of woods, bushes, open fields, trees or bushes along fences, roadsides, border of stream, marsh, pond or lake, garden, orchard, about buildings.

2. Compare its size with that of the crow, the robin, or the English sparrow.

3. What are its most striking colors?

4. Does it show flash colors when flying? If so, where and what color?

5. In action is it slow and quiet or active and nervous?

6. Does it occur alone or in a flock?

7. What is its manner of flying?

8. Describe its song and call-note?

9. Where does it sit when singing?

10. Does it sing when flying?

represented in a given locality throughout the year.

2. Summer residents,—species that come to us from farther south in the spring, rear their young and return south in the fall.

3. Winter residents,—species that come to us in the fall and remain till spring.

4. Transient visitors,—species that nest farther north and winter south of us, and consequently pass through our country when migrating in spring and fall.

Every effort should be made throughout the year to become acquainted with our "permanent residents." Transient visitors and summer residents claim special attention during the months of April and May.

Keep records of returning birds, when first seen, and when seen in numbers. All school grades are interested in the bird-calendar. But migration is too large a subject to stop here. The question naturally arises: "Where do our mig-

ratory birds spend the winter?" Make outline maps to show the winter and summer homes of a few species, and show the paths of migration by broken lines. Study the nesting range of each as given in Chapman's "Handbook of Birds," or any other good bird-book, and indicate this area by dots.

You will find that the movement of birds is often very extensive; in some cases they migrate thousands of miles, from South America to the northern parts of North America. The data, as given by Chapman for the Kingbird, show that it is an extensive traveller, and breeds over a wide range.

Make a map for this species, also maps for the Bobolink and Redstart.

Why do birds migrate? Is migration an instinct or a habit? Space will not permit a discussion of these questions further than to say, that some modern naturalists think that the change of climate which took place during the glacial period affords an explanation of the phenomenon of migration. But this theory is open to many objections. Read up the subject of migration as opportunity presents.

Study the nests of birds, form, materials of construction, location, etc., etc. Make a map of your locality showing the sites of nests, naming the species owning them, and also giving the name of the shrub or tree in which they are found. Go over the ground again in the autumn, after the leaves fall. Review your map and note how many nests escaped your notice, when the leaves were on. Why do birds take such care to conceal their nests? Correct your map and note that it is in reality a bird census of the locality. Is it rich in insectivorous birds?

Much can be done to increase the bird population of a district by planting trees and shrubbery, by providing food, baths, and nest material, by putting up bird houses, and by eliminating, as far as possible, all their enemies.

Figure 2 shows bird-houses in various stages of construction. Tree swallows, chickadees, martins, and woodpeckers are all glad to nest in man-made houses. They should be made of old weathered boards, and large enough to give each pair of birds a floor space, varying from six inches square for martins, to three inches square for tree swallows, and about eight inches high. A single door, opening near the top, should be made two inches in diameter for the larger

birds, and about one and one-half inches for the smaller birds. The robin is often attracted to a platform nest—a shallow box about six inches square, with the sides not more than two inches high—fastened under the eaves of a veranda, or other sheltered place about a dwelling. They will often use the same box for the second nesting, if the old nest is removed as soon as the first brood is on the wing.

More specific directions are given for making homes, etc., for birds, in REVIEW for May, 1914, pages 253 and 254.

Bird language is something more than song. Do all birds have the gift of song? Although Shakespeare says:

"The crow doth sing as sweetly as the lark
When neither is attended,"



Fig. 3.—THE HAIRY WOODPECKER
Doing his best to reduce insect life.

yet most bird students are more impressed with the variety and volume of his "calls,"—ejaculation, epithets, etc. Study this bird and its language; and also the calls of other species. A little friendly deception in the use of the squeak, or call of hungry young birds, will often draw the old birds from their hiding.

In studying the color of birds, they should be sought in their natural haunts. Lines and markings that were conspicuous in other surroundings, are now a part of their protective coloration. Note that all birds do not enjoy an equal degree of protective coloration. Compare the colors of birds in spring and late summer, also compare the colors of the male and the female.

Food and the relation of birds to man are closely connected topics. Apart from their

esthetic value, — beauty of form and plumage, and sweetness of song—birds are chiefly prized for their economic value, especially in keeping down insect pests, and for eating weed seeds, and in preying upon rats, mice, and other destroyers of our grain and fruit trees, and in acting as scavengers.

In a report of the Department of Agriculture at Washington, issued in 1912, Dr. Henshaw estimates the loss to the agricultural interests of that country at upwards of \$700,000,000 from insects alone. Our loss is certainly proportional; and this loss is caused chiefly by an insufficiency of bird life, on our cultivated lands. "Experience the world over has shown that as bird life decreases insects increase; also, that birds are more efficient in keeping down insect pests than all other agencies, natural and artificial, combined."

[Cuts supplied by Messrs. Ginn & Co., Boston. Figures 1 and 3 from 'Agriculture for Beginners'; 2, from Hodge's 'Nature Study and Life.']

PARISH MEETING AT GLASSVILLE.

A meeting, called by Inspector Dixon, of teachers in the Parish of Aberdeen, Carleton County, was held early in March, in the Glassville school house. Ten teachers were present, and the meeting proved to be instructive and enjoyable. The following subjects were briefly discussed:—Sanitation; under this head came the question of getting rid of the house-fly, and of the use of dust-bane. Arithmetic, how to teach the metric system practically, by letting the children measure walls, desks, books, etc., in metric measures; arithmetic problems bearing on the life of the community, as farming or lumbering, were advocated. Reading:—the common defects were noticed, and the importance of distinctness in reading and speaking was dwelt upon. In dealing with the writing-lesson, the muscular movement was given first place in the discussion. Under the head of nature-study, the speakers strongly advocated field-days, when the pupils, and especially the younger ones, could learn to observe the birds, flowers, effects of rain or snow and other signs of nature's work; that they should be questioned as to their daily observations on the way to and from school, and be encouraged to make collections. The teaching of patriotism was talked over, and lessons on the war and on the use of the flag were suggested.

SPRING NATURE STUDY.

L. A. DEWOLFE.

The spring unrest is again in the air. The next few months will be the Nature Student's Paradise.

Possibly no more fascinating exercise can be assigned to school children than the reporting of the date and locality of the first appearance of each spring flower and of each migratory bird. Detailed description of the bird is desirable. The plant should accompany the report. There is, then, no possibility of mistaken reports.

In Nova Scotia, such work has been done for many years under the heading "Phenological Observations." Some teachers are so mechanical, however, as to accept reports only of the plants and birds on the printed schedule; and, even then, the accuracy of the observations is seldom verified. The printed list is all right for an official report; but so soon as the child's observations are prescribed, the child loses his individuality. Encourage him to observe and report everything; and give him public credit by recording the observations on the school blackboard.

If the exercise is made merely a contest for the largest number of credits, it has lost its educational value. The contest is natural and enjoyable. Suggest, however, details to look for; and discuss the significance of these details in the great scheme of nature.

For example, the alder catkins are now unfolding in sunny situations. The botanist feels it his duty to classify them with mathematical exactness, count their parts, place them in their proper pigeon-hole in the scale of evolution, and then consign their dead bodies to some musty collection where other botanists at other times can bring other specimens of the same species for comparison. Children are not interested in that. They want to know why this or that part is made as it is. What has this to do with the life-history of the plant? Has the plant any bird friends or insect friends? Why are some catkins different from others on the same shrub? What will become of these catkins later? Have they lived in vain? These and a score of other questions will come to the child's mind if the teacher, through one or two

leading questions, starts him to investigate and to wonder.

Instead of answering the child's questions directly, the teacher can suggest observations and experiments which will prolong the child's interest and develop in him the habit of questioning nature herself.

The teacher may not know the answers to the children's questions; but it is good teaching to have the questions asked. The teacher is not the only source of information.

When the first butterfly appears, one of these warm April days, raise the question, "Where did it come from?" "Where did it spend the winter and how?" It is not necessary to answer these questions at once. In fact, the answer depends on the kind of butterfly it is. Some kinds spend the winter as bears do. Many pass the winter in the chrysalis stage. The answers to some school questions may be discovered years afterwards. And what a pleasure the discovery is!

It matters little whether children get much nature information in school or not. It depends on the way they get it. But it is tremendously important that they should acquire the habit of asking, wondering and investigating.

There are many things that children must be told. Life is too short to discover everything of economic importance. With each telling, however, set a task that will enable the child to verify the statement.

It is possibly out of place here to give cut and dried details of a nature lesson. I believe, however, that teachers could be of very great assistance to each other by reporting observations they have made or methods they have used in connection with nature teaching.

I am enclosing a little nature story based on observations made in germinating beans. It was written by Miss Muriel Boutilier, Dartmouth, N. S. Let children test the truth of the story by growing some beans in school.

What was the "brown blanket?" What was the "white sheet?" Notice whether the "little toes" are the first to break through the sheet. Did it push its "whole body" above the brown blanket? Possibly there are mistakes here. Find out.

Following is the story:

The Spring Baby.

The last red glow of the April sun was sinking in the golden west, as Mother Nature, after asking God's blessing, kissed her Baby Bean, and tucked him into his warm little bed. The cosy, brown, blanket was wrapped well around him; and, as he was going to have a long sleep, even his little eyes were covered so that the golden dawn would not awaken him.

Soon our baby was lost in slumber, travelling in a dream through the delightful lanes of fairyland. Here he was finding so many wonderful, beautiful things that he felt very cross when a gentle tap, tap, on his brown blanket awoke him.

His new friend, the rain, however, came in; so he was not a bit lonely. He told the rain where he had been and how much he had enjoyed his visit. "Why, my dear," returned his friend, "by just taking a little drink you may really go to this beautiful land."

After his guest had gone, our little Bean followed his advice. Soon he began to feel so big, the little white sheet in which he was wrapped felt so tight, he was sure that he would not be able to breathe. Suddenly the sheet burst and, Oh joy! he was able to wiggle his little toes out. Next, he pushed his little head out above the brown blanket; and finally his whole body emerged.

"Oh," he exclaimed, "the rain was right. I can now see all the beautiful, wonderful things." Each morning as the dawn awoke the birds, and he heard their sweet songs, he felt himself growing taller and taller. Soon he spread out two little arms with which he pushed himself up still higher.

So he kept on wiggling his little toes down deeper among the worms and his little head higher towards the birds.

Tree planting in the west is important; the renewing of the white pine is important; the pulpwood question is important; many other phases of the question are important, but the all-essential thing in regard to the question of forests is to get the community wakened up to the idea that at any cost the destruction of forests by fire must be stopped.

HINTS FOR APRIL AND MAY.

April and May bring their special days of observance, and these days offer opportunities for the little change of work and stimulus, which both teachers and pupils need at this time of year. Do not be satisfied with making them merely occasions for a little display and recreation. If they are observed in the school-room at all they should be made really educational; some solid information should be gained, and some enthusiasm engendered.

St. George's Day and Shakespeare's birthday both fall on April 23. St. George began to be regarded with special honour by Englishmen during the third Crusade. In 1222 it was ordered that his day should be kept as a national festival, and ever since then he has been regarded as England's patron saint. The stories told of him are legendary, and vary greatly, but he is always represented as wearing, or carrying on his shield, the red cross, which is the symbol of Christianity, and conquering a dragon, the emblem of sin. His is the upright red cross in our flag, and the red and white roses worn on St. George's Day show the colours of the cross and its field. Shakespeare and other poets have many references to him. King Henry V. calling on his soldiers to attack Harfleur, tells them to cry, "Heaven for Harry, England, and St. George."

Even the lower grade children ought to know that Shakespeare is the greatest of all English poets, and that he lived in the time of Queen Elizabeth, before this country was discovered; and something, according to their understanding, about the matter of his plays. Read them one of Lamb's Tales from Shakespeare: let them learn one of the songs: "Hark, hark, the lark," or "Fear no more the heat o' the sun," or, "Orpheus with his lute," or "Thorough bush, thorough brier;" and one or two patriotic quotations, such as:

This England never did nor never shall
Lie at the proud foot of a conqueror;
But when she first did help to wound herself.

or,—

Let all the ends thou aim'st at be thy Country's, thy God's and Truth's.

Perhaps if you tell your pupils that the Germans say that Shakespeare is really their poet, because they have studied and honoured

him more than we have, it will stir them to a resolve that this boast shall not be true, and that they, at least, will learn to honour him as one of our most glorious possessions.

Arbor Day needs a good deal of planning for. Do not degrade it into a mere housecleaning day. Have the spring cleaning, both inside and out, done beforehand, and devote the day itself to its proper purpose. Plant trees and shrubs if you can do it with enough knowledge and skill to ensure their growth. The sight of a few dying shoots brings the day into contempt. But in these days of Rural Science Schools, there is little excuse for such helplessness. The Directors in the different provinces stand ready to aid all who appeal to them.

If, for any good reason, there can be no tree-planting, give lessons on the uses and conservation of trees. Prepare these well beforehand; get the children to name the trees in the neighbourhood, and any use that they know of their being put to. Tell about the value of the forests of Canada, and of your own province. Dwell not only on the value of the timber, but on the value of trees for protection and for beauty. Point out that in the days of the early settlers the first necessity was generally to cut away the trees, but that many districts were unwisely cleared, because nothing but trees would grow in them, and that now the great need is to plant trees and preserve them. Appeal to the pupils' pride in the beauty of trees in their own town or village, and point out places where trees would be an advantage. Tell them that in 1914, Canada had over 1,400 forest fires. Let them discuss burnt lands that they have seen, and the ways by which forest fires might be prevented. If you can get it firmly fixed in the heads of even a few of your pupils, that they must do all they can to increase and preserve our forest wealth, you will have done your country true service.

Readings and recitations about trees will be of interest. For your opening exercises read the parable of the trees in Judges xi: 8-15, and the story of the barren fig-tree in St. Matthew xxxi, 17-22. Read the laws about trees in the Old Testament, Leviticus xix, 23-25; xxvii, 30, Deuteronomy xx, 19.

Empire Day will be dealt with more fully

next month, but in order to give plenty of time for preparation, we print in this issue some facts about the Empire that may not be readily accessible to all teachers, and that may be used in preparation for the day; and also Miss Veazey's plan of teaching the younger children by questions and answers. The questions will of course be varied by each teacher to suit her own class. They might be supplemented by a set of questions on the Empire and the war. Patriotic poems will be more in demand this year than ever. We recommend the following books of selections: "The Children's Cameos, Patriotic and National," George Philip & Son, 32 Fleet street, London. "The Country's Call," a short selection of patriotic verse, Macmillan Company, Toronto, ten cents. "Songs and Sonnets for England in War Time," (all written since the war began), Bell & Cockburn, Toronto.

The following names have lately been published in the Strand Magazine as those of Britain's ten greatest soldiers and ten greatest sailors: Wellington, Marlborough, Roberts, Cromwell, Wolfe, Moore, Wolseley, Clive, Sir Charles Napier, Lord Clyde, Nelson, Drake, Blake, Lord St. Vincent, Hawke, Rodney, Anson, Howe, Hood, Collingwood. An Empire Day exercise might consist of a roll call of these heroes, each name responded to by a very brief recital of his most famous deeds.

"A dry March and a dry May portend a wholesome summer, if there be a showering April between." So says Bacon. We have had our dry March, and the truth of the saying and the reasons for it might be discussed by nature study classes and school gardeners. Signs of spring are coming thick and fast, although it is true that "the spring comes slowly up this way." Perhaps no one who has not lived by a frozen river or lake and seen the ice go out, knows the sense of release that spring can bring. A Canadian living in England writes on February 22nd, "The snow-drops and celandines are all over the place now, and the daffodils in bud. Winter in the real sense of the word is just about over. Today I smelt the spring, soft and sweet, but without any of the invigorating tang of spring in the country at home; for one misses the smell of the pine-needles and of the melting ice and snow." Happy the children who are in the country and can note the spring

sights, sounds and smells as they appear; and the country teacher has an opportunity to cultivate the sense of beauty, and to teach the children to find pleasure in their surroundings. Here is a little poem by Nora Hopper that they will readily learn:

Blossom on the plum,
Wild wind and merry;
Leaves upon the cherry,
And one swallow come.

Red windy dawn,
Swift rain and sunny;
Wild bees seeking honey,
Crocus on the lawn;
Blossom on the plum.

Grass begins to grow,
Dandelions come;
Snowdrops haste to go,
After last month's snow;
Rough winds beat and blow,
Blossom on the plum.

MAKE YOUR OWN DRINKING CUPS.

If drinking cups are not at hand you can make them.

Material.—8 by 8 inch square of any smooth tough paper.

Fold on one diagonal. Place on desk with fold at bottom.

On the left hand edge measure up from lower corner $4\frac{1}{2}$ inches and place a dot.

Fold lower right corner to touch dot on the left side, and crease.

Turn paper over. Fold lower right corner to touch angle of fold on left side. Fold down the triangles left at the top, one on each side, and tuck into the openings of lower folds.

These may prove more expensive than the regular manufactured cups if time of pupils in making them is considered, but the hand work experience will make up for it.—*Kindergarten Primary Magazine*.

Colonel Farquhar, commander of the Princess Patricia's Canadian Light Infantry, and late secretary to His Royal Highness the Governor-General, has been killed in action at the front.

HIGH SCHOOL LITERATURE.

An Introductory Lesson on "Paradise Lost."

PSYCHOLOGICAL AIM.—To give exercise in constructive imagination by narrating the argument of "Paradise Lost."

To arouse.—1. Sympathetic interest in Milton's Life and Work. 2. Aesthetic feeling for the grandeur and beauty of the poem.

MATTER AND METHOD.

I. INTRODUCTION.

Teacher writes names of poet and poem on the blackboard. "Paradise Lost" an epic, i.e., a narrative poem treating of a great theme, in noble language.

Questions out of pupils that "Paradise Lost" is the story of how man lost Paradise or Eden, and reads Bk. 1, lines 1-26. "Of man's first disobedience."

II. PARADISE LOST.

Teacher questions from pupils that the story is about Adam and Eve and their temptation by the serpent.

Teacher describes.—1. The war in Heaven and its result. Satan rebels against God. He is cast out of Heaven by Michael. Reads Bk. 1, lines 43-49. "Him the Almighty Power hurled."

Teacher describes.—2. Satan and his angels in Chaos. Satan rises from the fiery lake. Bk. 1, 221-229. "Forthwith upright he rears." He addresses his followers and calls a council of war. He decides to take revenge by attacking mankind. He is chosen to go in search of the newly-created earth. He finds it with great difficulty.

III. THE TEMPTATION.

3. Disguised as a bird of prey, Satan hears Adam and Eve talking about their life. Teacher questions from pupils that they would probably speak of the Tree of Knowledge of Good and Evil.

In a dream Satan tempts Eve to eat of this tree, but in vain. He tries again and succeeds.

Teacher reads Bk. IX. "So saying, her rash hands in evil hours." Adam eats too of the fruit (as Milton considers), for love of Eve.

Satan returns to Chaos with news of his

success. In the midst of evil rejoicings, his angelic form changes.

Teacher tells the story of.—4. The Repentance and God's Promise. Adam and Eve repent. They are driven from Paradise. Their final redemption is foretold.

IV. MILTON'S LIFE.

Teacher questions from pupils that the lives of great writers help us to understand the meaning and object of their works, and gets examples of this, e.g., Scott, Dickens.

Teacher relates (1), Milton's early life; a period of quiet and severe study. He was born in London, 1608.

(Teacher questions from pupils something about the history of England during his lifetime.)

His father was a Puritan, and a prosperous, cultivated man.

Milton goes to St. Paul's school and shews great love of learning and poetry.

Teacher describes briefly the nature of the education of the day, showing how it would encourage a love of literature, and tells how Milton injured his sight by much study.

He goes to Cambridge. Resolves to give up his life to writing. Teacher reads Sonnet, "How soon hath Time."

He travels on the Continent. Resolves to write a poem on some lofty theme.

Teacher describes (2), His Political Life. It is a time of civil strife in which Milton takes part from a sense of duty. At the age of forty-three he becomes blind. Teacher reads Sonnet. "When I consider how my light is spent." After the Restoration he has to retire from public life.

(3). The last period of Milton's life.

Teacher describes its solitude and seriousness. He sets about accomplishing his early purpose. He writes "Paradise Lost" and "Paradise Regained," 1674. Milton's death.

GENERALIZATION.—Teacher questions from pupils (1), that Milton was (a) A poet. (b). A politician. (2). That his epic "Paradise Lost" was written (a) As being the greatest and most solemn subject he could chose. (b) As a contrast to and a protest against the vices of his time.

APPLICATION.—Teacher leads pupils to consider Milton's life and his poem with a view to

finding further reasons for his choice of subject, expecting answers such as the following:

1. The poem is the story of the contest between right and wrong, while in Milton's life such a struggle was going on in the Civil War.

2. Milton going blind, would find it easier to picture the sublime and supernatural scenes of "Paradise Lost."

SUMMARY FOR BLACKBOARD.

I. PARADISE LOST.

The war in Heaven.
Satan's Revenge.
The temptation and fall.
The promise of redemption.

II. MILTON'S LIFE.

1608. Birth.
Early life of study and resolve.
Political life.
Blindness and poetical work.
1674. Death.

(These notes were originally written for a class of children from eleven to thirteen but a few additions make them well adapted for introducing the poem to older pupils who are about to study one or two books in detail.)

SLIPS IN PRONUNCIATION.

The March REVIEW printed such an interesting paragraph on "Slips in English," that one reader is encouraged to ask for the publication of a few pet aversions in pronunciation, hoping for similar lists from other readers.

In our generation, we teachers could do much for the Maritime provinces, by correcting the faulty pronunciation of many very common words.

Doubtless every teacher within the influence of the EDUCATIONAL REVIEW has been a member of some society whose constant reference is made to the "seca-tree" although no mention of that plant can be found in the minutes. Associated with it, however, and alas, well known in many schools, is that cuicus fruit which in its positive form is a native of southern climes, but in its comparative form indigenous to our country, viz., "fig-gers."

A still more puzzling fruit is the "lie-berry". Who has seen a "lie-berry?" It really is as mysterious as Sairy's friend "Mrs. Harris." Possibly it grows in the shade of a "hiss-tree!"
—Karshish.

EMPIRE DAY IN THE LOWER GRADES.

EMMA VEAZEY.

To the subjects of the British Empire in this year 1915 every day is Empire Day. This epoch-making war has taught people the true meaning of that word "Empire;" not a loosely joined series of possessions nominally attached to the Motherland, but a vast whole working to one end — the common good.

Topics of the war must of necessity enter largely into our programme for this day. It is right that it should be so, especially in the higher grades; but in the lower grades we must as usual put certain facts relating to that part of the Empire which most concerns us into concrete form to supply a foundation on which the children may build up future knowledge.

Perhaps the simplest method of doing this is the "Question and Answer" method. In this exercise all the school may take part; this in itself is no small advantage. The questions and answers will form, of course, only a part of the programme, the war items, lessons on flags, relations of colonies to the Motherland, Patriotic songs and recitations being equally important and desirable.

Each teacher will consult her own taste as to these songs and recitations. "We'll Never let The Old Flag Fall" is enjoying a great deal of popularity as a song just now, and the children love to sing it. "Oh Canada" is always a favorite, as also "Soldiers of the King." For recitations, one may find in back numbers of the REVIEW for May, Scott's "Colors of the Flag" and "The Flag Goes By." The "Recessional," too, is always appropriate, and some of the more recent poems which really tell something about the war, and inspire the right spirit of courage, patriotism and sacrifice.

Following is a list of questions and answers prepared for the lower grades. They may be varied at the discretion of the teacher.

(1). What is Patriotism? Patriotism is love of Country.

(2) What is our Country? Our Country is Canada.

(3) Is it enough then that we should be loyal to Canada? No! we should be loyal to the whole British Empire.

(4) Why should we be loyal to the whole

British Empire? We should be loyal to the whole British Empire, because Canada is a part of that Empire, and England's King is our King.

(5) What do we mean by the British Empire? The British Empire is that part of the earth's surface which is under the rule of King George V.

(6) When did George V begin to reign? He began to reign in 1910, on the death of his father, King Edward VII.

(7) How many children has King George V? King George has six children.

(8) What is the Queen's name? The Queen's name is Queen Mary.

(9) What is the name of the Prince of Wales? The name of the Prince of Wales is Prince Edward.

(10) What proportion of the earth's surface does the British Empire cover? The British Empire covers about one-fifth of the earth's surface.

(11) What is the number of the subjects of King George V? About 400,000,000.

(12) What proportion of the inhabitants of the earth are subjects of King George V? About one-fifth.

(13) Into how many continents is the earth divided? The earth is divided into six continents North America, South America, Europe, Asia, Africa and Australia.

(14) On how many of these continents are portions of the Empire found? Portions of the British Empire are found on all these continents.

(15) What do we mean when we say, "on the British Empire the sun never sets." We mean that because it has possessions all over the world, there is always some part of the Empire on which the sun is shining, although it may be dark on the other parts.

(16) What is the Flag of the Empire? The Flag of the Empire is the Union Jack.

(17) Why is it called the Union Jack? It is called the Union Jack because it is made up of a union of the crosses of St. George (England), St. Andrew (Scotland), and St. Patrick (Ireland.)

(18) What do we find beside the Jack on the Canadian Ensign? We find the Canadian coat-of-arms on the Canadian Ensign.

(19) What is the National Emblem of Canada?

The Maple Leaf is the National Emblem of Canada.

(20) When did Canada become a part of the British Empire? Canada became a part of the British Empire in 1763.

(21) Who used to own Canada? The French used to own Canada.

(22) How did the French get it? They claimed it by right of discovery.

(23) How did the French lose Canada? England and France were at war, and England sent out Wolfe who captured Quebec in 1759, and in the treaty which followed in 1763, Canada became part of the British Empire.

(24) When was the Dominion of Canada formed? The Dominion of Canada was formed July 1, 1867.

(25) What do we call July 1st? We call July 1st Dominion Day, or the Birthday of the Dominion.

(26) How did Canada get its name? The name Canada is supposed to come from two Spanish words Aca nada (Here is nothing), an expression used by some early visitors to Canada to express their disappointment at finding no gold or silver there.

(27) Who is the Governor General of Canada? The Duke of Connaught is the Governor General of Canada. He is to be succeeded by Prince Alexander of Teck, a brother of Queen Mary.

(28) What relation is the Duke of Connaught to King George? The Duke of Connaught is the uncle of King George.

(29) Who is Premier of Canada? The Hon. R. L. Borden is Premier of Canada.

(30) Who is Governor of New Brunswick? The Hon. Josiah Wood is Governor of New Brunswick.

(31) Who is Premier of New Brunswick? The Hon. George J. Clarke is Premier of New Brunswick.

(32) What is Victoria Day? Victoria Day is the 24th of May, the birthday of King George's grandmother, Queen Victoria.

(33) What is Empire Day? Empire Day is the last teaching day before Victoria Day. It is a day on which we talk about the Empire.

(34) What is the National Anthem? The National Anthem is "God Save the King."

THE PARTS OF THE EMPIRE.

1. THE UNITED KINGDOM.—The seat of the Imperial Parliament.

2. THE SELF-GOVERNING DOMINIONS.—The Dominion of Canada, the Commonwealth of Australia, the Dominion of New Zealand, the Colony of Newfoundland, and the Union of South Africa. Each of these has its own responsible Government, under a governor representing the Sovereign, and in the cases of Canada and Australia there are the Dominion Parliament of Canada, and the Commonwealth Parliament of Australia; there are also, in Canada, subordinate Provincial Legislatures, and in Australia, State Legislatures.

To all intents and purposes these Dominions are independent states. The Crown is the sole visible link by which they are bound to each other and to the Mother Country. Their communications with the Imperial Government are made through the Colonial office.

3. THE INDIAN EMPIRE.—The vast Dependency of India is an Empire in itself, maintaining a famous army, and conducting its business with neighboring states, by means of a Foreign Department of its own.

The Viceroy, whose term of office is usually for five years, represents the Sovereign, and is assisted by a Council, which includes the Commander-in-Chief of the Indian Army and Ministers of different Departments. India's communications with the Imperial Government are made through the India office.

4. THE CROWN COLONIES.—These, which have not direct popular self-government, but are controlled from the Colonial Office, each have a Governor; and some have also a Legislative Council with limited powers. They include Ceylon, Cyprus, British West Indies, British Guiana, British Honduras, Falkland Islands, Fiji, Gambia, Gibraltar, Gold Coast Colony, Hong Kong, Leeward Islands, Malta, Southern Nigeria, St. Helena, Sarawak, Seychelles, Sierra Leone, Basutoland, Rhodesia, Federated Malay States, Trinidad, Tobago, Tristan da Cunha, Turks and Caicos Islands, Wei-hai-Wei, Windward Islands, Bahamas, Bermudas, Barbadoes, Borneo. These are all lumped together as being not Dominion States; but they exhibit many varieties of control, from self-government almost

as free as that of the great Dominions, as in Rhodesia, to something like a paternal despotism, as in Basutoland.

The Island of Ascension is in a class by itself, being under the control of the Board of Admiralty. Aden, on the Red Sea, forms part of the Province of Bombay, in India.

5. PROTECTORATES.—These include Bechuana-land, East Africa, the Soudanese Provinces, Northern Nigeria, Nyassaland, Somaliland, Uganda and Zanzibar. In these cases the territories are administered by the native rulers, but under the advice of a British Resident. The latest addition to the protectorates is Egypt, which was nominally under the suzerainty of Turkey, but is now a British Protectorate.

Amid these varieties of forms of administration in the Empire, the one guiding principle is that of government for the benefit of the governed. This union of diverse States, each with more or less fulness of independence, has been the peculiar and characteristic glory of the British Empire. But it has some weaknesses, and these have led to discussion and plans for increasing the unity of the Empire's action, while leaving freedom to all its parts. In 1885 was founded the Imperial Federation League, which did a great deal of educational work, but which has since been dissolved. In 1895 the British Empire League came into existence with the object of "maintaining and strengthening the connection between the United Kingdom and the outlying portions of the Empire."

In 1897 took place the first of the great London Conferences, in which all the Dominion Premiers took part in a discussion on Imperial affairs. A second Conference was held in 1902, and it was then settled that they should take place every four years. At these meetings, different plans were suggested and discussed for closer organization of the Empire. In 1909 took place the first Conference of Ministers of the Empire on Imperial Defence.

Abridged from a paper, "The Island Sceptre," By Henry E. Bannard, in the *British Empire Review* for March.

A small force of Bulgarians has invaded Serbia; which, unless the action is disavowed by the Bulgarian government, may bring all the Balkan nations into the war. Bulgaria would like to regain Adrianople, which she took in the first Balkan war, and lost in the second.

DEVICES FOR KEEPING UP INTEREST.

ETHEL J. COSSITT.

The part of the school year is approaching, when the teacher experiences the greatest difficulty in maintaining in her children an interest in school work. They have grown tired of the daily routine and of methods apparently most successful during the early part of the year, and consciously or unconsciously are wishing for something new.

This is likely to be especially true of the small miscellaneous school, where the limited number of pupils in a grade removes any stimulus from emulation. It is this time which puts to the test the resourcefulness of the teacher.

Some devices used to advantage in a small rural school may prove helpful to inexperienced teachers, who have encountered the difficulty above referred to.

One incentive to work, the influence of which lasted throughout the year, was an honor roll.

The teacher first provided herself with several boxes of little stars, which come in bright colors, gold, red, blue and green, made by Dennison Co., and obtainable through almost any book store. To these she added some small Union Jack seals, obtained from the EDUCATIONAL REVIEW office. Then a large sheet of cardboard bearing the words "Honor Roll," was tacked to the wall in a conspicuous place and preparations were complete.

When a pupil had made five perfect marks, on any one subject, say spelling—his name was written on the sheet and a star placed after it. For the same number of perfect marks, in writing, English or number work, he was given another star,—a different color for each subject. When his stars numbered ten, they were followed by a Union Jack seal as a special honor, and he began over again.

It was almost pathetic to see how hard the little people would work to earn a star, and even the boys in grade eight had difficulty in concealing their satisfaction over the number of stars following their names.

The little school room was used on Sundays for religious services, when the honor roll with its bright stars and flags, proved a source of interest and pride to the parents and friends of the children.

An added impulse to Nature Study was given in the following manner:

At the beginning of the school year, a space was ruled off on the blackboard under the heading, "Wild Birds seen in September," and changed for each succeeding month. Each fall month showed a decline in the number, as the birds left for the south; very few were seen in the winter save—in this particular section,—the jay, crow and chickadee, with an occasional owl heard in the distance, but what pleasure to welcome back and record the names of the migratory birds, when they returned after their long absence.

When spring came, a large sheet of white paper was tacked to the wall, headed, "Who found the Flowers?" and ruled as follows:

Name of Flower	When and Where Found.	By Whom.
Mayflower.	April 15, Hill pasture.	Mary Wood.

This brought to the school specimens of practically all the wild flowers of the section, some of which sent the teacher to her Botany, to the delight of the children who always like to puzzle the teacher.

These children were much interested in animal stories, and greatly enjoyed hearing read daily bits from F. W. Burgess's "Little Stories for Bedtime," now being published both serially and in book form by the "Montreal Daily Star." The little people of the green forest, the green meadows, and the smiling pond, became very real to the children, and even figured in their games at recess.

Each day, before the reading, some pupil was called upon to give a resume of the story of the preceding day, thus providing an excellent exercise in English, and cultivating the memory as well.

To encourage interest in the world beyond the section, a large calendar of the previous year was turned face to the wall, and on the reverse side were pinned pictures clipped from the daily papers, of men who were in any way distinguishing themselves in the public eye, and of places or buildings where any event of note had taken

place. The pupils were encouraged to bring clippings from their own papers, and though some unsuitable pictures were brought, such as of those who had attained to "a bad eminence," there were enough of the right kind to keep the space well filled.

Each new picture formed the subject of a little talk on current events, and in this way the children became familiar with the names and faces of many of the men who are making his tory.

Just now, when so many heroic deeds are being done in connection with the war, and so many famous men adding to their fame, much suitable material for work of this kind could easily be obtained.

These few devices, all so simple in themselves, so easily carried out, produced good results, mainly because they were used by an enthusiastic teacher, who was herself interested in every phase of school life, and they helped to relieve the monotony of one little country school, and to keep the children interested and happy as children ought to be.

FOREST FIRE PROTECTION.

It is generally recognized that in all phases of a campaign for better fire protection, prevention should be the primary object, and that one essential to this is the reduction of the fire hazard through removal of the underlying causes. One feature of the forest fire hazard is the presence along many roadways of much inflammable debris, usually consisting of old slashings from logging operations or settlers' clearings. The systematic removal of such debris is taken up in various sections of Canada and the United States. An illustration of what is being done along this line in one of the states is shown by the following summary of instructions issued by the Forestry Commission of New Hampshire:

1. Preserve and protect all valuable shade trees.
2. Cut all sprouts, brush, bushes, young trees, or weeds, that in any way obstruct travel, cause a fire risk, or are objectionable from the standpoint of roadside beauty.
3. When cutting bushes, leave a thrifty

sprout or young seedling in each clump. These will soon grow into trees and help shade out the undergrowth, making less brush to cut in the future.

4. Young evergreens should be left unless they shade the road so heavily as to hold the frost late in the spring. Their value in holding moisture in the ground surface reduces the fire risk. Trim these young evergreens three feet from the ground and remove the inflammable litter under them to reduce the danger from surface fires.

5. When the brush is cut it should be collected in small piles at a safe distance from any young growth and burned as soon as weather conditions permit burning to be done with safety.

Conservation.

BIBLE READINGS FOR OPENING EXERCISES

- | | |
|---------------------------|--------------------------|
| 1. I Kings, xvii, 1-7. | 12. II Kings, iii, 6-20. |
| 2. I Kings, xvii, 8-16. | 13. II Kings, iv, 1-7. |
| 3. I Kings, xvii, 17-24. | 14. II Kings, iv, 8-17. |
| 4. I Kings, xviii, 1-16. | 15. II Kings, iv, 18-37. |
| 5. I Kings, xviii, 17-26. | 16. II Kings, v, 1-8. |
| 6. I Kings, xviii, 27-40. | 17. II Kings, v, 9-19. |
| 7. I Kings, xviii, 41-46. | 18. II Kings, v, 20-27. |
| 8. I Kings, xix, 1-18. | 19. II Kings, vi, 1-12. |
| 9. I Kings, xix, 15-8. | 20. II Kings, vi, 13-23. |
| 10. II Kings, ii, 1-8. | 21. II Kings, viii, 1-6. |
| 11. II Kings, ii, 9-15. | |

WHO WHAT AND WHERE

ANSWERS TO MARCH QUESTIONS.

1. The lady in Milton's "Comus" was separated from her brothers in a dangerous forest.
In Shakespeare's play, "Cymbeline," Imogen, disguised as a boy, finds in a forest her brothers Guiderius and Arviragus, who had been stolen when children.
2. Viola in Shakespeare's "Twelfth Night" was mistaken for her brother Sebastian.
3. Lilius and Darsie Redgauntlet, Lucy and Harry Bertram in "Guy Mannering."
4. a. Jeanie Deans, speaking of her sister Effie. *The Heart of Midlothian.*
b. Charles Lamb, of his sister Mary. *Mackery End in Hertfordshire.*
c. Queen Bellicent, of her foster-brother, King Arthur. *The Coming of Arthur.*
5. Lizzie and Laura, in Christina Rossetti's poem, "Goblin Market."

ANSWERS TO CORRESPONDENTS.

C. L. A. asks for analysis of the following:

"So strong did their dislike to him grow, that having gone to feed their flocks in a distant part of the country, and Joseph having been sent to inquire after their welfare, they determined when they saw him approach to put him to death."

Clause	Kind of Clause	Connective	Subject	Attributive Adjuncts to Subject	Verb	Object with Qualifying Words	Complement	Adverbial Adjuncts to Verb
A. So strong did their dislike to him grow	Principal.....		dislike...	their to him	did grow		so strong	
B. that.....they determined to put him to death	Subord. to A. Adverbial Clause of Result	that.....	they...		determined.	to put him to death		*having gone. flocks
C. When they saw him approaching	Subord. to B. Adverbial Clause of Time modifying "determined"	when.....	they....		saw.....	him approach- ing		*Joseph.....welfare.

*These phrases=adverbial clauses of time when they had gone, etc., when Joseph had been sent, etc.

ROBERT BURNS.

Burns is incomparably the greatest poetic voice of a great and famous people. England has no poet so entirely English as Burns is Scottish. The greatest thing possessed by any nation is its own rendering of the universal heart of man. For Scotland that found perfect utterance in Burns. The Scotsman who is capable of enjoying poetry in the very smallest degree is sure to enjoy Burns. There is in London every winter a popular concert which is advertised as "A Night wi' Burns." No English poet has ever received exactly that proof of having reached the very heart of his people. Such a man is for his country the greatest of all poetic figures, and for all the world, in virtue of that fact, and in despite of all the obstacles of dialect, a figure whom no lover of poetry can afford to ignore.—*The Times*.

ARRANGING BANK DISCOUNT PROBLEMS.

I find the following arrangements of Bank Discount Problems very convenient for my own use during this class period, for verification of the pupil's work, or for the immediate direction of errors.

Given:

Face	\$1500	\$185	\$230	\$435	\$6225
Date	Sept. 15	April 12	July 21	May 1	March 15
Time	60 days	90 days	3 months	4 months	60 days
Rate of dis.	6%	6%	5%	5%	4%
Date of dis.	Oct. 20	June 20	Aug. 20	July 31	April 15

Find:

Day of mat.	Nov. 14	July 11	Oct. 21	Sept. 1	May 14
Term of dis.	25 days	21 days	62 days	32 days	29 days
Discount	\$6.75	\$.65	\$1.98	\$1.93	\$20.06
Proceeds	\$1493.25	\$184.33	\$228.02	\$4533.07	\$6204.94

Given:

Face	\$1925	\$147	\$2725	\$975	\$1150
Date	March 5	May 3	April 7	May 16	Sept. 5
Time	30 days	50 days	90 days	30 days	60 days
Rate of dis.	4%	3%	3%	5½%	6½%
Date of dis.	March 10	May 4	April 15	May 25	Sept. 15

Find:

Day of mat.	April 4	July 2	July 6	June 15	Nov. 4
Term of dis.	25 days	59 days	92 days	21 days	50 days
Discount	\$5.35	\$.73	\$18.62	\$3.13	\$10.38
Proceeds	\$1919.65	\$146.27	\$2706.38	\$971.87	\$1139.62

In all of the problems given above the notes are non-interest-bearing, and there are no days of grace allowed. —*Popular Education*.

SELECTIONS FOR APRIL.

The Rainbow.

Hiawatha saw the rainbow,
In the eastern sky the rainbow,
Whispered, "What is that, Nokomis?"
And the good Nokomis answered,
"'Tis the heaven of flowers you see there,
All the wild flowers of the forest,
All the lilies of the prairie,
When on earth they fade and perish
Blossom in the world above us!"

— Longfellow.

Plant a Tree.

(By LUCY LARCOM.)

He who plants a tree
Plants a hope.
Rootlets up through fibres blindly grope;
Leaves unfold into horizons free.
So man's life must climb
From the clouds of time
Unto heavens sublime.
Canst thou prophesy, thou little tree,
What the glory of thy boughs shall be?

He who plants a tree
Plants a joy;
Plants a comfort that will never cloy,
Every day a fresh reality.
Beautiful and strong,
To whose shelter throng
Creatures blithe with song.
If thou couldst but know, thou happy tree,
Of the bliss that shall inhabit thee!

He who plants a tree
He plants love;
Tents of coolness spreading out above
Wayfarers, he may not live to see
Gifts that grow are best;
Hands that bless are blest;
Plant,— life does the rest!
Heaven and earth help him who plants a tree,
And his work its own reward shall be.

Boats Sail on the Rivers.

Boats sail on the rivers,
And ships sail on the seas;
But clouds that sail across the sky
Are prettier far than these.

There are bridges on the rivers,
As pretty as you please;
But the bow that bridges heaven
And overtops the trees
And builds a road from earth to sky,
Is prettier far than these.

—Christina Rossetti.

An Elm.

The great elm-tree in the open, posed
Placidly full in front, smooth bole, broad branch,
And leafage, one green plenitude of May.
O you exceeding beauty, bosomful
Of lights and shades, murmurs and silences,
Sun-warmth, dew-coolness,— squirrel, bee and bird,
High, higher, highest, till the blue proclaim's
'Leave earth, there's nothing better till next step
Heavenward!'— so, off flies what has wings to help.

—Robert Browning.

Spring.

The alder by the river
Shakes out her powdery curls;
The willow buds in silver
For little boys and girls.
The little birds fly over,
And oh, how sweet they sing!
To tell the happy children
That once again 'tis spring.

The gay green grass comes creeping
So soft beneath their feet,
The frogs begin to ripple
A music clear and sweet,
And buttercups are coming,
And scarlet columbine,
And in the sunny meadows
The dandelions shine.

And just as many daisies
As their soft hands can hold,
The little ones may gather,
All fair in white and gold,
Here blows the warm red clover,
There peeps the violet blue;
O happy little children!
God made them all for you.

— Celia Thaxter.

Give fools their gold and knaves their power;
Let fortune's bubbles rise and fall;
Who sows a field, or trains a flower
Or plants a tree is more than all.
For he who blesses most is blessed;
And God and man shall own his worth
Who toils to leave as his bequest
An added beauty to the earth.— Whittier.

The Dutch Windmill,

(By a Boy.)

(Imitate the sound of the mill.)
This is the way the Dutch windmill goes round:
High, then low; high, then low;
Kissing the sky and the air and the ground,
Ho, oho! Ho, oho!
Arms spreading wide in the soft autumn breeze.
High, then low; high, then low;
Fanning the flowers and grasses and trees.
Ho, oho! Ho, oho!

— St. Nicholas.

NEW BRUNSWICK SCHOOL REPORT.

In the report for 1913-14 of New Brunswick Schools, the Chief Superintendent, Dr. W. S. Carter, points out that this province cannot afford to make educational experiments, but must profit by the experience of others. To this end Dr. Carter has made and reported careful observations of school methods, both of organization and management, in other parts of Canada and in the United States, and these constitute a very interesting and useful part of the volume. Among other developments in education that impressed Dr. Carter as most worthy of attention are medical inspection in schools, the use of schoolhouses as social centres, the retention of the high school pupils, and vocational schools.

The report shows that there are over 70,000 pupils in the schools of the province. There were 1,922 schools open, and 2,032 teachers engaged, of whom only 201 were men. The Superintendent considers the increases in salary gratifying, and thinks there will be no disposition to reduce them.

Dr. Carter recommends—That trustees be required to obtain the sanction of the inspector for plans of new school buildings. That rural school grounds, where possible, should be not less than one acre in area. That each school district shall be permitted to elect at the annual meeting one or more representatives to Teachers Institutes, and to vote money for their expenses. That the Board of Education should be empowered to authorize the Inspector to act in the place of a School Board, in school districts where an acting board cannot be secured. These recommendations are in addition to those made in former reports, relating to taxation and to free text books.

The general impression gained from reading the report is very encouraging, and the reports of the several inspectors show keen interest and much practical attention to detail. Manual Training and Elementary Agricultural Education are making steady progress. The most important addition to buildings for educational purposes is the Normal School Annex, occupied in September, 1914.

Included in the report are reports of the University of New Brunswick, the Provincial Normal School, the schools for the Deaf and Blind, and an account of the Interprovincial Educational Convention in Halifax in August.

CURRENT EVENTS.

The Chinese administration announces that henceforth the City of Canton will be known as Shameen.

General Botha's campaign against German Southwest Africa is slowly progressing, and he has recently captured an important position which opens his way into the fertile interior of the country. The desert of shifting sand which had to be crossed by the union forces was the strongest defence of the Germans.

The demands of Japan for certain concessions in China have been peaceably settled; and if there was any danger of a rupture of friendly relations between them it has passed away.

A number of British and foreign vessels have been destroyed by German submarines in the Irish Sea and the English Channel since the eighteenth of February, when the Germans declared the coast waters of the British Islands a war zone and warned foreign ships to keep away. The sunken vessels were chiefly merchant steamers bound in or out of British ports, and in most instances their crews were given some chance to escape by taking to the boats. But this was not always the case. One passenger steamer was sunk with a large number of passengers on board, and more than one other had a narrow escape from being sunk without warning. Sinking merchant vessels and wantonly killing non-combatants is much like piracy; and the officers and crews of German submarines who have been rescued from the sea are held apart from other prisoners of war and not treated as honorable opponents. In reply to a German protest against this distinction, Sir Edward Grey has said that more than a thousand officers and men of the German navy have been rescued from drowning by the British, sometimes to the prejudice of British naval operations, but no case has occurred of any officers or men of the British navy being rescued by Germans.

Germany is said to be building submarines at Antwerp, which can only reach the sea by passing through Dutch waters. This and other indications seem to show that she plans to treat Holland as she has treated Belgium, and, by getting possession of both countries, to extend her North Sea coast from Denmark to the English Channel.

Eight warships of great size and power will soon be added to the Russian Baltic fleet.

It is announced at Ottawa that training camps for soldiers will be maintained all summer at Valcartier, Petawawa, Niagara and other points, including some point in British Columbia.

Two thousand five hundred Canadian nurses have volunteered for service in the war, and as many have been accepted as the British authorities asked for.

Canada has contributed two million dollars worth of food and clothing for relief work in Belgium.

It has only recently been announced to the general public that the battle of Ypres, (cepr), on the last day of October, was one of the most important of the great battles of this war; and may take its place in British history with the battles of Crecy and Waterloo, though no one realized its full importance at the time. The

British lost fifty thousand men that day, out of one hundred and twenty thousand engaged; the French and Belgians lost seventy thousand; but the Germans lost three to one of the Allies, and failed to break through the slender line that held them back from Paris and from Calais, and kept the last narrow strip of Belgian territory from falling into their hands. There have been other severe and critical engagements before and since, on that part of the line from Belgium to Switzerland which is held by the French alone; the full story of which, perhaps, will never be told. The decisive action at Ypres was the British share in the defence, and it was worthy of the best traditions of the British army. The British are still holding their portion of the line in Flanders, about thirty miles out of the whole front of four hundred miles. Here many of the Canadian soldiers are stationed, and the British have made a notable advance within the last month, defeating the Germans at Neuve Chapelle, about ten miles south of the Belgian border.

The Dominion Parliament has voted an additional appropriation of a hundred million dollars for carrying on the war. The special war tax stamps will come into use on the fifteenth of this month. In addition to the postage stamp, a one cent war stamp will have to be affixed to letters and post cards before they are mailed; and bank checks and other documents must also bear the war stamp. These stamps will probably continue in use for some time after the close of the war.

The French have occupied strong positions in the Vosges (vozh) Mountains during the winter, and are in readiness to advance into the valley of the Rhine, which lies but twenty miles beyond.

In the east, the great event of the month has been the fall of Przemyśl, (approximately pronounced pschem-ish, with the accent on the first syllable, the r being silent and the l nearly so.) The capture of the fortress of Przemyśl after a siege of exactly six months gives the Russians possession of the whole of Galicia north of the Carpathians and east of Tarnow. It also sets free the large investing army for service elsewhere, and with this reinforcement the Russians are pressing through the mountain passes towards the plains of Hungary. Though great battles have been fought along the Russian border, Germany has not yet taken any of the Russian fortresses. Przemyśl is the first stronghold taken by the Russians.

Little progress has been made by the allied fleets in their efforts to force the passage of the Dardanelles. One French and two British ships of the attacking fleet were sunk by floating mines. The Allied fleet has been reinforced by ten more warships, and an army of British and French troops has been landed on the peninsula of Gallipoli, which forms the northern side of the strait and divides it from the Aegean Sea. The peninsula is eight miles wide; but the leading British ship can throw shells over it to destroy the forts on the strait, her gun fire being directed by wireless messages from the ships at the mouth of the strait. A Russian fleet is approaching the Bosphorus, to bombard the forts at the Black Sea entrance.

Reports from all parts of Mexico tell of anarchy, murder and destruction, with no prospect of any of the leaders in the field being able to establish a settled government.



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SCHOOL AND COLLEGE.

Plans are being secured for the new Academy at Acadia to replace the building lately destroyed by fire. An early start will be made on the new building.

An attractive and well-attended school concert was held in the Masonic Hall at Sherbrooke, N. S., on March 18. The proceeds are to go towards a school library. The pupils of the intermediate and primary departments of this school have already contributed twelve dollars toward the Belgian Fund.

We regret to record the death of Miss Sadie Porter, a member of the staff of the Colchester, N. S., Academy, which took place at her home in Stellarton on March 2. Miss Porter was a graduate of Dalhousie, and a very efficient teacher.

On March 18, the death took place at his home in Digby, N. S., of Mr. Edward Manning, a man well known in the educational world of the Lower Provinces. Mr. Manning began teaching in the old Grammar School of St. John, N. B., under Dr. Patterson, in 1858, and was one of the staff of that school when the School Act came into force in 1782. After eighteen years service he resigned from the Grammar School in 1872 to be Head Master of the Female Academy, at Charlottetown, P. E. I. He was afterwards Superintendent of Education in Prince Edward Island. Together with the late Mr. T. W. Lee he taught a private school in St. John for some years, and later he was appointed secretary of the St. John Board of School Trustees, a post which he resigned in 1909. Mr. Manning was a man of learning, and of cultivated tastes; his interest and skill in music contributed to his success as a teacher. He is widely known as the author of an excellent spelling-book. He was born in Ipswich, England, and was eighty-two years of age at his death. He is survived by his wife and five children, one of whom Dr. James Manning, is a member of the St. John Board of School Trustees. The funeral took place at St. John on Sunday, March 21.

On certain afternoons in March, the teachers of the Amherst, N. S., Schools, were granted an opportunity of visiting the classes in grades corresponding to their own in other buildings.

When the Teachers' Institute meets in Middle Musquodoboit, N. S. in September, 1915, there will be an exhibition of school work, including the products of home and school gardens. Prizes are offered for vegetables, oats, poultry, cut flowers and for collections of wild flowers, weeds, native woods, minerals, mosses and ferns and insects. Also for hand-writing, drawing, wood-work and other manual training work, cooking, sewing and knitting. There will be a prize for the best school garden, and for the rural school showing the greatest improvement in the school grounds during 1915.

Miss Florrie O'Brien of Fredericton, N. B., has been appointed teacher of the Indian school at Kingsclear. Miss Rena Donahoe, the former teacher, has resigned and is removing to Boston, Mass.

Miss Laura A. Purves, teacher at Lower Titusville, Kings County, assisted by pupils and friends, gave a pie

social and entertainment in Titusville Hall, in October, 1914, by which the sum of thirty-seven dollars and seventy-three cents was realized to be used for painting the school house. This sum was supplemented by a gift of five dollars, making a total of forty-two dollars and seventy-three cents for repairs.

Principal Sexton of the Nova Scotia Technical College and director of Technical Education for Nova Scotia, addressed the members of the New Brunswick Legislature at Fredericton on March 18, on the subject of Technical Education, and urged the adoption of a plan similar to that of Nova Scotia, where Technical Education has been very heartily adopted. He also spoke in some detail on the subject in the Board of Trade Rooms on the evening of the same day. The Fredericton Board of Trade have urged upon the Provincial Government the advisability of establishing evening industrial continuation schools in towns throughout the Province, and the appointment by the government of a trained expert to supervise the work. The government have promised consideration of the proposal.

LOWELL'S TREE.

"Trees come close to our life. They are often rooted in our richest feelings and our sweetest memories, like birds, build nests in their branches. I remember the last time that I saw James Russell Lowell; he walked out with me into the quiet garden at Elmwood to say good-bye. There was a great horse-chestnut tree beside the house, towering above the gable and covered with blossoms from base to summit—a pyramid of green supporting a thousand smaller pyramids in white. The poet looked up at it with his gray, pain-furrowed face, and laid his trembling hand upon the trunk, "I planted the nut," said he, "from which this tree grew, and my father was with me and showed me how to plant it."—*Henry Van Dyke*.

RECENT BOOKS.

We have already strongly recommended the children's cameos of poetry and prose to our readers, for use in school. The latest little volume is this series in a timely one consisting of Patriotic and National selections, made with the same care and taste that distinguishes the rest of the set. The teacher who is looking for poems for Empire Day programmes will do well to consult this little book. [George Philip & Son, 32 Fleet Street, London. 72 pages, paper 4d., cloth 5d.]

English Letters, selected for reading in school, rather surprises one by beginning with a letter from Cicero at

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For Calendar containing necessary information and for admission, apply to

R. P. STEEVES, Director Elementary Agricultural Education, Sussex, N. B.

Puteoli to Atticus at Rome. However, all the other selections are from letters written by genuine and famous English or rather, British men and women, beginning with Oliver Cromwell's letter to Colonel Walton announcing the victory of Marston Moor, and, very tenderly, the death of the Colonel's eldest son. "He was a gallant young man, exceeding gracious. God give you His comfort." Other soldier's letters are from the Duke of Wellington, and the two Napiers. The poet Cowper, Charles Lamb and Dickens are well represented, and so is Lewis Carroll by some of his letters to little girls. This is a very varied and good selection, and in the hands of a good teacher will do much to enliven history and literature lessons. [English Letters, by H. J. Anderson, M.A., Longmans, Green & Co., London and New York. 135 pages, 50 cents.]

THE MAGAZINES.

The Canadian Magazine for April prints in full the famous Pastoral Letter addressed by Cardinal Mercier to the people of Belgium and suppressed by the Germans. There are some excellent articles in this number, including a brief, well written and sensible answer by John Lewis, to the charge that former generations of Canadians were "parasites"; a short account of Riel's trial, "Through Brittany in War Time," by Paul A. W. Wallace and other good reading.

There are a number of modern and dynamic articles in the April "Century." Among them are a second prison article by Miss Madeline Z. Doty, who recently accomplished such fine reformatory work in the State Prison for Women; a penetrating study of the present status of Socialism by Edwin Davies Schoonmaker, and a perhaps prophetic essay by Roland G. Usher upon "British Sea Power and South America." All of these contributions deserve attention for their thoughtful forward view.

The current number of The Round Table, begins by discussing the progress of the war, and whether we have done and are doing all that we can do and should do to win. The argument is that our liberties are at stake; and that no consideration of what should be done in times

of peace should have any weight in deciding the course which we must adopt now. With particular reference to conscription, the writer claims that the ordinary arguments for or against it at other times have nothing to do with its wisdom or unwisdom in the course of a great war. There is but one criterion by which all measures must be judged — will they, or will they not, help us to win the war. The second article advances the plea that the Dominions should have some voice in the settlement at the close of the war. A third article deals with the growth of autocracy in Germany, and the German doctrine of the unity of Europe, of course made under German leadership, as opposed to the British doctrine of the balance of power. The latter is the doctrine of equal rights for all nations, but the German doctrine is the doctrine that the strongest must rule. The article points out that some responsibility rests upon Great Britain and the other democratic nations, for not taking adequate steps to meet the German menace when it became evident that Germany intended to dominate Europe by force of arms.

N. B. OFFICIAL NOTICE. EMPIRE DAY.

The participation of teachers, school officers, pupils and citizens generally is asked for a special emphasis upon Empire Day observance during the present year.

The special day to be observed will fall upon May 21st, and the Board of Education is desirous that every school shall observe it, not only by a programme of patriotic nature, but in addition, during the afternoon, by a public meeting, which should provide for speakers and at which the people of the district should be invited to attend.

The co-operation of Canadian Clubs, Daughters of the Empire, and all other patriotic societies throughout the Province is invited to assist in making observance of the day a notable one and worthy of the great crisis which calls it forth.

(Sgd) W. S. CARTER,

Chief Superintendent of Education.

Education Office, April 1, 1915.

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S. KERR,
Principal.

OFFICIAL NOTICE.

There will be a course of Physical Drill given at Fredericton this year, beginning July 13 next. There will be no bonus on account of the war. The course for Cadet Corps will be given this year.

W. S. CARTER,
Chief Superintendent of Education.
Fredericton, N. B.,

A CANADIAN NATIONAL ANTHEM

(The Version Adopted by the Canadian Club)

At the meeting of the Canadian Club on Friday evening, the Secretary, Mr. D. A. Macnab, read a letter from the President of the Calgary Canadian Club, stating that as the result of an investigation into the question of what was the most popular English version of "O, Canada," they had found an overwhelming majority in favour of that by Mr. R. Stanley Weir. This version was accordingly adopted as the standard version for Canadian Clubs at the annual meeting of the Association at Vancouver last summer. Following are the words of Mr. Weir's version, which will be sung at the next meeting of the Canadian Club:—

O Canada! Our home, our native land,
True patriot love thou dost in us command.
We see thee rising fair, dear land,
The true North strong and free,
And stand on guard, O Canada,
We stand on guard for thee.

CHORUS:

O Canada! O Canada!
O Canada! We stand on guard for thee,
O Canada! We stand on guard for thee.

O Canada! Where pines and maples grow,
Great prairies spread and lordly rivers flow.
Thou art the land, O Canada,
From East to Western Sea,
The land of hope for all who toll,
The land of liberty.

O Canada! Beneath thy shining skies
May stalwart sons and gentle maidens rise,
And so abide, O Canada,
From East to Western Sea,
Where e'er thy pines and prairies are
The true North strong and free.

—Orillia Packet.

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THE EDUCATIONAL REVIEW,
St. John, N. B.

The Women's Canadian Club of St. John, N. B., with the co-operation of Dr. Bridges, City Superintendent of schools, and the School Board, are arranging a special celebration of Loyalist Day, May 18, in that city.

It seems to me that this is the year of all others when Empire Day should be observed with the gravest solemnity and in the most sober spirit of national devotion. Was not the move-

ment started for the very purpose of arousing all British subjects to a knowledge and appreciation of their duties to the Empire? Was it not hoped thereby to assist towards the consolidation of the Empire, and thus to strengthen it in the face of peaceful competition or of hostile aggression?

The British Empire now finds itself locked in a life or death struggle with the most powerful military nation in the world. Is not this the very moment when the watchwords of the Empire movement — Responsibility, Duty, Sympathy and Self-sacrifice — should ring in the ears of every subject of the king, throughout his vast dominions?— *Lord Meath.*

Looking over the field today, turning our thoughts away for one moment from the desperate struggle that is going on over so many hundred miles of frontier, we can see clearly that out of that issue is coming the possibility of all the things that we have dreamed of and worked for in all these years that have passed. Through the thick clouds of war hanging on the horizon, through these terrible lists of casualties which we see from day to day, the eye that has a vision can see dreams being fulfilled about which we have perhaps often been hopeless. It is now, I think, twenty or twenty-one years since one evening, walking in the park at Dalmeny, Lord Rosebery turned to me, and said, "I sometimes think that nothing but a great war will ever federate this Empire.—*Dr. Parkin.*

We have the pleasure of giving our readers an article on Empire Day, written especially for this issue of the REVIEW by Sir George Foster, Minister of Trade and Commerce.

New Brunswick teachers are asked to read carefully the official notice on Physical Training Courses in this issue. The important word "not" was omitted from the notice in the April issue. There will be *no* Cadet course this year.

THE FARMERS AND THE RED CROSS SOCIETY.

We publish today an appeal on behalf of the Red Cross Society, by Dr. James W. Robertson.

Dr. Robertson is still best known to the farmers of Canada as Professor Robertson. He began his official public service at the Ontario Agriculture College nearly thirty years ago. Twenty-five years ago he went to Ottawa as Dairy Commissioner for the Dominion. The Dairying Service of the Department of Agriculture soon became known and trusted throughout Canada. From Prince Edward Island to Alberta, farmers profited by the illustration dairy stations and the travelling instructors. The output of cheese and butter in Canada added to the reputation of its rural workers.

Other public services of continuing and growing value were inaugurated, while Professor Robertson was Commissioner of Agriculture. Among them were the live stock branch, the cold storage service, the seed grain competitions, trial shipments of fruit to the United Kingdom, and extensions of markets.

Besides there were the manual training movement, the school gardens, household science, and the consolidated rural schools.

In more recent years, Dr. Robertson was chairman of the Royal Commission on Industrial Training and Technical Education. Farmers in all provinces are familiar with the survey of farms by the Commission of Conservation and the Illustration Farms of its Committee on Lands, of which he is chairman.

In these and many other ways, Dr. Robertson has given the farmers of Canada the best that was in him. He says he is their debtor, for many opportunities, for much kindness and for warm appreciations. But they are his debtors too. And he now reminds them of that for the first time in order to establish his right and privilege to appeal to them for this worthy cause.

The editor of the EDUCATIONAL REVIEW will gladly forward to Ottawa and acknowledge the receipt of any sums sent to this office in answer to Dr. Robertson's appeal.

What does this flag stand for? Of course, it stands for the British Empire; but it is because it stands for justice, liberty and Christianity that we honor it.—*Lord Rosebery.*

NATURE STUDY OF ANIMALS.

H. G. PERRY.

Bird Study.

The most striking characteristic of birds, one that distinguishes them from all other classes of vertebrates, is their covering of feathers. Con-



Fig. 1.—ARCHÆOPTERYX.
I, II, III, IV, digits, showing joints and claws.

trast their covering with the hair of mammals, the scales of reptiles and fish, and the naked slimy integuments of amphibians.

For school work, on feathers, provide a quantity of feathers of different kinds, and have at hand a pigeon or hen in a cage.

The feathers covering the body and those forming the wings and tail of birds, are called contour-feathers.

Select a contour-feather from the body covering. It consists of a hollow base, the quill, from which arises the expanded portion, the firmer distal part of which is called the vane and the fluffy part next the quill, the fluff. The vane is made up of barbs, extending right and left from the rachis. The barbs are bound

together, to form the vane by interlocking barbs bearing hooks. These parts are readily seen by the aid of a good hand lens or microscope.

Why are the fluff-barbs not bound together like those of the vane?

Compare the larger contour-feathers of the wings and tail, which are commonly called quill-feathers, with those of the body, as to structure, size, arrangement and function. Scattered among the contour-feathers and covered by them, are down-feathers, but down is best exemplified in the covering of the newly hatched chick. How do down-feathers differ from contour-feathers?

The long hair-like feathers, tipped by only a few barbs, are filoplumes. They are most in evidence when the other feathers are removed, and are often called pin-feathers, a term which is more appropriately applied to developing contour-feathers.

In developing contours, pin-feathers we find the little vane with its rachis and barbs all packed closely together reminding one of a developing bud bearing its tiny leaves and flowers. The blood in the quill explains how it is being nourished.

Part the feathers on the body of the pigeon, and note their color just beneath the surface. Are both ends of the feathers colored alike? The change in the color of birds during the course of the summer is due to a change in the color of the outer (exposed) parts of the vanes. In looking for examples carefully note the colors of the male robin, and other birds.

The overlapping of feathers on birds is much like the arrangement of shingles on the roof of a house, and they serve to protect the bird from rain, snow, wind and cold, and also to keep in the heat of the body. The contour-feathers serve as heavy outer-clothing, while the down may be compared to underclothing.

In many instances the feathers are oiled till they are quite water-proof, this is especially true of birds that frequent the water, and even our land birds oil their feathers to some extent. The oil gland is situated dorsally near the base of the tail. Watch hens oiling their feathers just before a shower. They seem to know that rain is coming.

Explain why the hen presents such a sorry appearance when exposed to a long rain. How would a duck look under similar conditions?

The color of feathers in some birds may serve as a protection from the observation of their enemies; in others the color, and often shape, seem especially designed for purpose of ornamentation. Select examples from among our native wild birds and domesticated forms.

The large contour-feathers of the wings and tail are of special use in flying. Expand the

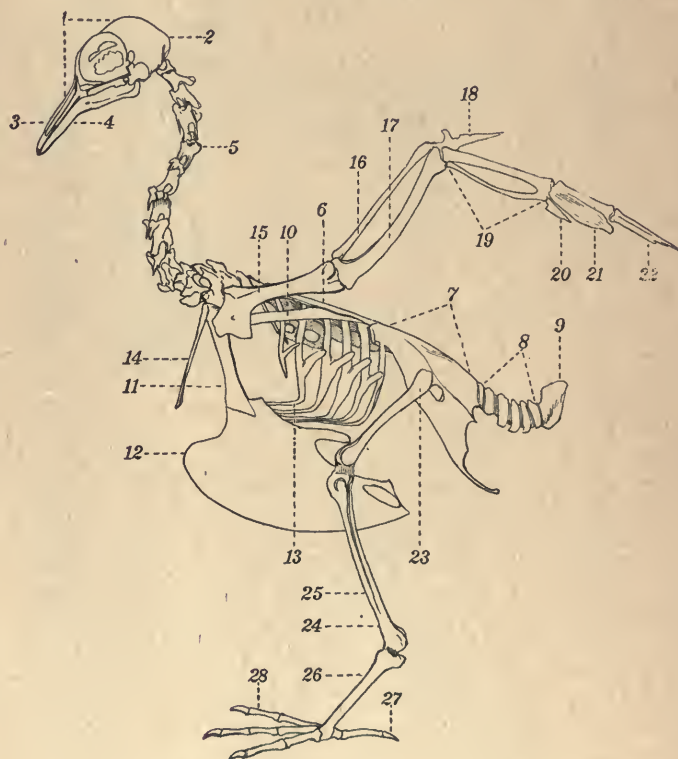


Fig. 2.—SKELETON OF PIGEON. (Reduced).

1, skull; 2, cranium; 3, upper mandible; 4, lower mandible; 5, cervicle (neck) vertebrae; 6, thoracic region; 7, pelvic region; 8, caudal region; 9, plowshare bone; 10, scapula; 11, coracoid; 12, keel of sternum; 13, ribs; 14, clavicles (wish-bone); 15, humerus; 16, radius; 17, ulna; 18, thumb; 19, wrist and hand bones; 20, bone of the third finger; 21, bone of the second finger; 22, end bone of second finger; 23, femur; 24, tibiolarisus; 25, fibula; 26, ankle and foot; 27, bone of first toe; 28, bone of second toe.

wings and note the nice arrangement of their feathers. Distinguish between primary and secondary wing-feathers. To which part of the wing is each kind attached?

Note that the feathers are so arranged that they present to the air a strong resistant surface in the down-stroke of the wing, and a minimum of resistance in the up-stroke.

In flying the wings are used chiefly as propellers, to force the bird through the air; but at times they seem to convert the whole animal into an aeroplane, as it either glides forward or

sweeps round and round in wide circles on outstretched motionless pinions.

The full-grown feather does not look much like the hard rough scale of the snake or other reptiles, yet biologists tell us that in point of

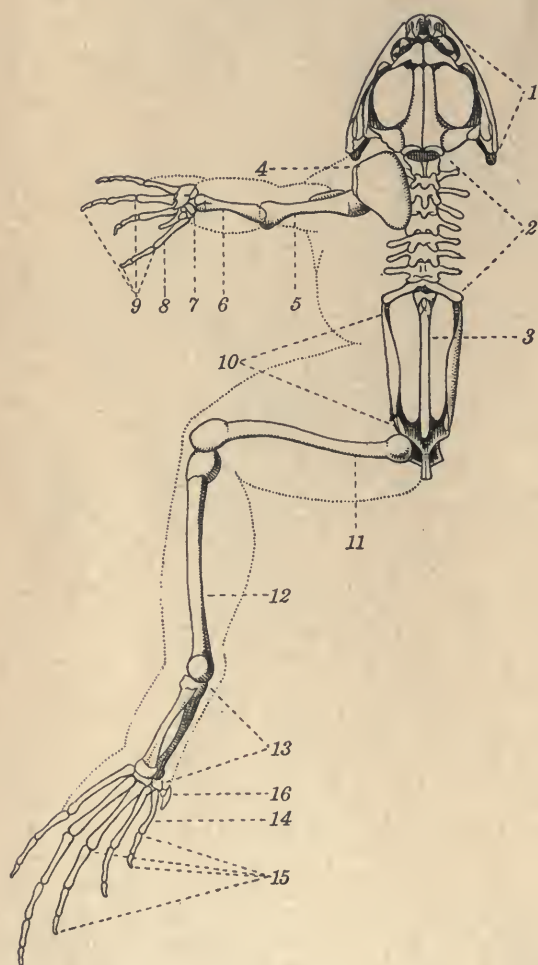


Fig. 3.—SKELETON OF FROG. (Natural size).

1, skull; 2, vertebral column; 3, urostyle; 4, scapula; 6, radius and ulna; 7, carpus; 8, Metacarpals; 9, phalanges of fore leg; 10, pelvic girdle; 11, femur; 12, tibia and fibula; 13, tarsus; 14, metatarsals; 15, phalanges of hind leg; 16, rudimentary toe.

origin, arrangement and growth, they are quite identical. In other words, feathers are modified scales. What has brought about this modification?

The fossil remains of flying reptiles are frequently found in the strata of the earth. These creatures were peculiarly bird-like in form, and without doubt mark early stages in the evolution of birds. Note that the feet of modern birds are still covered with scales.

Figure 1 shows an early fossil form with true feathers, but the tail is long and made up of many vertebrae, similar to the tails of lizards, and of the flying reptiles which preceded it. Compare this structure with the skeletal part of the tail of the modern bird, as shown in Figure 2. How are modern birds compensated for this loss of the long vertebral tails?

Study the skeleton of the pigeon, as shown in Figure 2, and compare it with the live birds, locating the parts named. This is a good exercise, especially in studying the wings and legs.

Note the location of the humerus, the radius, the ulna, the thumb, and the fingers of the hand (the distal part of the wing). Compare these and other bones with the corresponding parts in the human skeleton and the skeleton of the frog. This is a good exercise in the study of homologies.

Study the breast-bone, sternum, with its broad keel for the attachment of the thick muscles of the breast. Why are such large muscles needed at this particular place? What parts do they move? In birds that have lost the power of flight by taking to some other method of locomotion, such as swimming or running, we find a corresponding loss in the keel of the sternum, e. g. the ostrich.

Locate the little wing, thumb, on the wing of the pigeon or hen, and compare the whole wing with that of the *Archæopteryx*. Note that there were several free fingers in the wing of the latter, and each was made up of two or more joints, and ended in a claw. Do you find parts homologous to these in our modern birds?

In a similar way study the bones and joints of the leg and foot. Note especially the position of the knee, and the ankle joints.

"The earliest remains of birds of which we have any knowledge come from the Age of Reptiles. The oldest of these remains is the famous fossil known as *Archæopteryx*, two specimens of which have been found in Bavaria.

* * The *Archæopteryx* was a land bird about the size of a crow, probably arboreal in its habits, though not necessarily a good flier. It had true feathers, but it was very different from the birds of today in that it possessed teeth and a long, lizard-like tail of about twenty vertebrae. These last characteristics are strikingly reptilian, and such considerations point to the fact that

the birds developed from reptiles. As the development was undoubtedly gradual, we should expect to find forms possessing the characters of both groups."

The discovery of the *Archæopteryx* was a brilliant fulfillment of Huxley's prediction, based on comparative anatomy, that the groups of birds and reptiles would be found to be confluent in origin.



Fig. 4.—DEVELOPMENT OF THE FROG.

1, 2, 3, eggs; 4, young immediately after hatching; 5, tadpole with external gills; 6, 7, 8, 9, 10 and 12, further stages of development; 12, frog fully developed.

The Frog.

Figure 4 is given at this time as a suggestion and an aid to the study of the frog.

The study of this animal at this particular

time of year, if properly carried out, forms a most interesting subject for all classes.

Hatch the eggs in school in large jars filled with brook water, and watch the young develop from day to day. If care is taken to change the water frequently they can be easily kept till the end of the term.

The history of their development from week to week will serve as good topics for composition exercises.

Rake the bottom of ponds for toads' eggs, and treat in the same manner. The development of the toad is much more rapid than that of the frog.

Salamanders are also interesting. The young retain their external gills for months. Their eggs are to be found at this time of year. See Hodge's "Nature Study and Life."

[The cuts used in this article were supplied by Messrs. Ginn & Co., Boston, Mass. Fig. 2 from "Elements of Geology," Norton. Figs. 2, 3 and 4 from "General Zoology," Linville and Kelly.]

A RED CROSS APPEAL TO THE FARMERS.

Our country with its allies, is waging a great war for justice, for the protection of small nations in the enjoyment of their rights, for continued and growing freedom, and for the maintenance of its pledged word of honour. Much destruction and desolation are being caused. Lives are being lost by the thousand. Canada's first contingent is now in the thick of it. Some will fall sick; many may be wounded; some will pay the last full measure of devotion to their country and its cause.

The Red Cross Society exists to succor the sick and wounded in war. It needs more money to provide more beds at hospitals in Great Britain and France; it needs more money to pay more Red Cross nurses; it needs more money, and more things made by women, to supply to clearing hospitals, base hospitals and recovering hospitals.

I appeal to farmers to send me sums from \$1.00 to \$50.00, during the first week in May. Every \$50.00 provides one additional hospital bed with the giver's name over it. By sending me about \$10,000, you would serve your country well, bring credit to yourselves and make all of us very proud of you. For the sake of the wounded boys, make the gift substantial. It will be an investment towards the recovery of some Canadian soldier who stood in our stead that our cause might be upheld.

Faithfully your friend,

JAS. W. ROBERTSON, Chairman,
Red Cross Society at Ottawa.

The flag represents to you a great honor and a great privilege. It reminds you that you are "Citizens of no mean city."—Lord Rosebery.

NATURE STUDY.

L. A. DEWOLFE.

The most fascinating spot for the next few weeks is the garden. Those who are making new gardens will have visions of a glorious harvest a few months later, and those who have old gardens are watching to see how many shrubs and perennial flowers lived through the winter.

Children who become interested in gardening are acquiring habits that will give them greater pleasure and contentment in years to come than will, perhaps, any other one interest. Let them, therefore, prune their own rose bushes, set out their own strawberries, transplant their own shrubbery, plant their own seeds, and arrange their own perennials to suit some color scheme that may have been developed in the drawing lessons.

There is such an abundance of material during the next two months that every teacher and every pupil will be kept busy. I feel, therefore, that I may very profitably resign further space to the following story, written by Miss Mary Jennison, Truro.

The "Miss Brown" whom Miss Jennison has created is worthy of imitation. We'll let Miss Jennison tell us about her.

"POTATO" DAY AT SCHOOL.

One of the most interesting visits I ever paid to a public schoolroom was made one Friday, last autumn, at the invitation of Miss Brown, the teacher of some fifty little urchins in grades V and VI. The opening exercises were just over when I entered and all eyes were fixed on Miss Brown, as she said with a smile: "How many would like to have a 'potato day?'" In response to this seemingly amazing question, every hand was raised.

"A couple of weeks ago," she explained to me, we had a "wheat day," and the children were so interested I thought I would repeat the experiment. First, she continued, turning to the class, "we will have a 'potato story.'" Whereupon followed a short tale of the discovery of the wild potato in Virginia by Sir Walter Raleigh, with something of his adventures in that country and of the introduction of the potato into England and its subsequent cul-

tivation, told in simple, striking language, and in such a way as to appeal to the imagination of her listeners.

"Next," said Miss Brown, when the story was finished, "we shall do our arithmetic. No, you need not take out your books yet. Who can tell me how much it would cost a farmer to plant his field with potatoes if it took seven bushels of seed at seventy-five cents a bushel?" The deepest interest was shown as the children calculated this simple problem and awaited the next. About half a dozen were given before the exercise books were taken out and the more serious work of the day was begun.

As grade V was struggling with fractions, while grade VI had graduated into weights and measures, their questions were based on the topics which they were studying. I took the liberty of copying a representative problem of each grade from the board and quote them below:

Grade V.

A grocer bought 88 bu. of potatoes @ 61 cents a bu.; $\frac{3}{4}$ of them he retailed @ 65 cents and the rest @ 60 cents. Did he gain or lose and how much?

Grade VI.

How high would the walls of a bin 8 ft. long, 6 ft. wide have to be in order to contain 605 bu. of potatoes?

After arithmetic came recess, and then geography, which this morning took the form of a brief study of the chief potato growing countries of the world; their position, climate, inhabitants, industries and facilities for commerce — carried on by means of maps and pictures, especially picture postcards from the various countries named.

During this lesson and the next, the difficult words used were carefully written on the board by the pupils and allowed to remain. From the geography lesson the talk naturally followed on to the study of the potato as a plant; its varieties, the soil required for its growth, the way in which the plants were propagated, its enemies, special reference being made to the potato beetle and methods used for its extermination,—all this was amply illustrated. The plant with tubers of various kinds, as well as the potato balls, being passed round the class, while many interesting pictures showing planting,

cultivation and harvesting of the crop were shown.

The last ten minutes before noon were devoted to a drill upon the words written on the board, including the use of them in intelligible sentences. This took the place for the day of the more formal spelling lesson.

Having received a cordial invitation to do so, I was at the schoolroom door at the beginning of the afternoon session. The children hailed me with delighted exclamations: "Oh! have you come to hear more about potatoes? Isn't it fun? etc. I quite agreed, and waited as eagerly as they for further developments.

First, in the afternoon, came a reading lesson—an interesting little article on the potato beetle and its relation to the potato industry in Nova Scotia. This was taken from some agricultural magazine, and written on the board. The children eagerly vied with each other for the chance to read and took great interest in reading, not only correctly but intelligently as well.

By this time, I thought that the resources of even the resourceful Miss Brown must be at an end, but no, next came the suggestion that a composition should be written on "The enemies of the potato."

When finished, these compositions were copied into booklets, the covers for which would be made that afternoon. The interest with which the pupils applied themselves to the usually irksome task of planning out an essay was indeed remarkable. The compositions were begun in school and left to be finished before Monday.

As I glanced at a few books, I saw careful outlines being constructed and notes jotted down. Miss Brown, in the meanwhile, seemed everywhere at once, encouraging the lazy, helping the dull, giving a word of praise to the diligent.

The drawing lesson followed this, as the compositions were to be illustrated. Careful drawings of the tuber were first made, the same to be pasted in the booklets. Then dark green construction papers 12 by 9 inches were passed round, and folded in booklet form; while black paper was cut into various designs and pasted to the green. A few simple ideas were drawn on the board, but some of the best results were quite original. One of the most effective was

drawn by a little colored boy with considerable artistic talent. He had cut a silhouette of a man wearing a broad brimmed hat bending over a hoe, with a pile of something—presumably potatoes—beside him.

When covers were completed, work was put away for the day. As the dismissing bell rang, was it a wonder that a reluctant "Oh!" arose to every lip. No one had realized that the afternoon was over.

As I bade Miss Brown good-by, I thought it not surprising that, as I heard one of them say, her pupils wished "There never was no Saturday."

M. I. JENNISON.

THE STEMLESS VIOLETS.

J. VROOM.

Our native violets may be divided into three sections: (1) those without stems or offsets, (2) those with offsets or runners more or less in evidence, and (3) those with leafy stems. These notes deal with the first section, and are an attempt to point out the characters in the different species which will most easily lead to identification. The names are those of the seventh edition of Gray's Manual, to which the reader is referred for fuller descriptions.

Just how many different species of the stemless blue violets occur in the Atlantic Provinces of Canada is an open question, and one that will not very soon be settled to the satisfaction of everybody. Closely related species are known to hybridize freely, producing an endless number of intermediate forms. Seedlings from these natural hybrids may add to the confusion. The beginner, therefore, must look for those specimens that will answer best to the descriptions of recognized species, and be content to leave the others undetermined. The study of the various forms is attractive, with all its difficulties, and may lead to the recognition of some new species.

1. Hooded Violet, or Meadow Violet. *Viola cucullata* Ait.

Common in low grounds. Flowers usually blue, with a darker centre; strongly knobbed hairs in the bearding of the lateral petals. The Hooded Violet is so called from the shape of the young leaves, rolled inward at the base, though this is not peculiar to the species.

2. Small Blue Violet. *V. affinis* LeConte.

Either very scarce with us or generally overlooked. Very small at flowering time. Flowers deep blue with paler centre.

3. Northern Violet. *V. septentrionalis* Greene

Our commonest violet in open woods. Flowers about the same size as those of the Hooded Violet, but more evenly coloured, varying from deep violet-blue to pale lavender. Leaves with coarse hairs on the margin, veins and petiole; petals usually bearing a few scattered hairs. Hybrids between this and the Hooded Violet are sometimes strikingly beautiful, with large and abundant flowers that make them well worth transplanting to the garden. They can easily be propagated by division, but would not come true from seed.

4. New England Violet. *V. novae-angliae* House.

Sandy or gravelly shores of lakes and rivers; rare. Most readily recognized by its situation. Not well named, as it was first found in New Brunswick, and is perhaps more frequent in Ontario than elsewhere.

5. Ovate-leaved Violet. *V. fimbriatula* Smith.

Dry hillsides; rather scarce. Easily recognized by the shape of the leaf.

6. Arrow-leaved Violet. *V. sagittata* Ait.

Moist places; very rare with us, and differing from the typical form in having the leaves pubescent. The shape of the leaf is distinctive.

The rare Great-spurred Violet, or Selkirk's Violet, found in a few places in New Brunswick and Nova Scotia, belongs to the second section, as it spreads by underground branches. In the same section are the white violets, of which we have all that are mentioned in the manual except the true *V. blanda*. The third section includes our only yellow violet, *V. scabriuscula*, abundant in some places; the Canada Violet, scarce and local; and the Dog Violets, of which we have at least three distinct forms.

Three stemless violets from our region that approach No. 1 of the above list, and two that approach No. 3, have been named as distinct species, but are not yet generally recognized. They were all discovered by L. W. Watson, of Charlottetown. One, which bears his name, is an interesting white-flowered form that appears to be permanent.

LORD ROBERTS.

As a picture supplement for Empire Day we present our readers with a picture of the late Field Marshal Earl Roberts; and a little study of the life of this truly great man may well form a part of the special work of the day. An outline sketch of his life was given in the REVIEW for December, 1914, so all we shall do here is to speak briefly of some of those qualities which caused him to be so widely and deeply honoured and loved.

On his greatness as a soldier and statesman we need not dwell. We know of the great victories he won; we know how he foresaw this great war, and tried in vain to get England to make ready for it. And yet, when it came, no word of boasting or of reproach passed his lips. He was too great to boast and too busy working for his country to waste time in blaming others.

To be useful—that was his chief thought.

When this war broke out, he was too old to fight, but he did what he could; nothing was too small or simple a thing to do if it could be useful. He collected field glasses for the soldiers, he asked for saddles for them, he spoke stirring words to them before they left for the field, he wrote a message to the children of the Empire telling them the causes of the war. And last of all, he said, "I must go to France and see the Indian soldiers. It is the most useful thing that I can do at this moment." So he died in the same cause of usefulness.

He was the best beloved of British generals. "He was truly not only our commander-in-chief," said an Indian officer, "he was our father—the pattern of British officer we so gladly serve; brave, wise, and above all, full of sympathy."

Pure and simple in his life, faithful in service to God and his country, kind and courteous to others, he was "the almost perfect type of a Christian hero." It is not enough that his countrymen should admire his deeds and venerate his memory. His example should urge them to copy him in devotion to duty.

"'Tis not in empty phrase or golden shrine
But in the faithful following of such souls
Lies the true honour that is ours to pay."

The British Empire has been founded upon the basis of justice, equality, freedom and progress.—*Bishop Weldon.*

EMPIRE DAY AND THE WAR.

BY SIR GEORGE E. FOSTER.

Empire Day in 1915 comes to us all under far different conditions, and finds us with far different feelings than ever before.

To the majority of British peoples the Empire has been more of an abstract idea or an aspiration than a reality; a dream splendid and attractive yet unfulfilled.

To each dweller in any one of its many and widely distributed parts, his own natal or adopted country has been near to him, visible in entity, and connected in direct interests, social, national and governmental. The other portions of the Empire, thousands of miles distant, have been as it were relatives far removed, inadequately known, and seldom if ever seen.

Danger and menace scarcely realized as present in one's own locality were still more negligible by it in respect of remoter localities, and the belief was universal that Britain's might by sea and land was a sufficient shield and buckler against all hostile contingencies. And Britain's might was conceived as something quite apart from ourselves, of which we formed no part, and in the constitution and support of which we bore no share and took little or no direct interest. The idea of common peril and common concert and co-operation to thwart it or meet it was neither strong nor prevalent.

Suddenly and rudely on the 4th of August last the curtain was raised on a world tragedy, in which the Empire, world over, was involved. Then in a moment it flashed upon us in clear unmistakable vision that the Empire was a live, real, integral entity,—head and heart, body and soul, thought and action, indivisible and continuous.

The enemy powers threatened not Britain alone but every part of the Imperial possessions, Africa, Australasia, India, Canada, the islands of the sea, and the farthest small dependencies.

Their war vessels might any day bombard Sydney, Auckland, Bombay, Hong Kong, Victoria, Halifax, Quebec, and exact their heavy toll of life and property. Their troops might at any hour invade South Africa or any other British possession to which German territory lay contiguous, or to which troops could be conveyed by sea. The commerce of every

Empire port was liable to seizure and confiscation. Reports of raiders grew and multiplied, and to each part of the Empire vivid and real dangers were foreshadowed. From these our minds readily grasped what would lie in store were any combination of enemy forces able to destroy or cripple the British Navy. The common danger drove home with irresistible force the conviction of the unity of Empire; the abstract became quickly interpreted into the concrete. From that moment there was no longer cavil or doubt, the Empire was one, indivisible in being, united in defence.

The struggle, begun on the fourth of August, has taught its lessons in blood and tears;—the lessons of Imperial interdependence and solidarity. The ideals of Empire, its freedom and its honor; the existence of the Empire, with all that is implied therein for four hundred million souls, their lives and liberty, their institutions and civilization—all are at stake, and in their defence the millions of the Empire stand a mighty world wide unit.

Again in our generation men have to fight for liberty, and the rights of man and of small nations, as our forefathers have done for many a time in the storied history of Britain. Our brave men at the front and our brave women at home again repeat the lesson of renunciation and sacrifice without which nothing great has ever been won, or can be long retained. To the war of artillery indescribable, the interlocking in grim conflict of men innumerable, the death and sufferings of millions incomprehensible, we approach our Empire Day—with deep sorrow for the fallen—the wounded—the suffering bereaved. At such tremendous cost we must vindicate our rights and preserve our liberties. But they are worth it. And when these days of sore tribulation have passed, when we have mourned our dead, and honoured our heroes, we shall meet again on another Empire Day with the shadow and menace of a great world danger for ever removed, our hands interlocked, our hearts as one, our Empire united, safe and resplendent. God save the King, and God preserve the Empire.

Nature has made occupation a necessity to us; society makes it a duty; habit may make it a pleasure.—*Capelle.*

SEA POWER.

J. VROOM.

For a hundred years the people of the British Isles have rested quietly in the assurance that their homes were safe under the protection of the Royal Navy. When the "wooden walls of England" gave place to iron ships, the walls were stronger and the homes were safer than before. And all was well.

"Rule, Britannia; rule the waves;
Britons never shall be slaves."

The two sentiments expressed in the couplet are closely related in our minds, as cause and effect. True it may be that Switzers are not slaves, although they have no ships; yet their case is different, and few of us would ever question the theory which has governed our state policy for generations, that the freedom and safety of Britain's trade and Britain's widely scattered colonies, and even the very existence of the Empire, depend upon the preponderating strength of the British navy.

Just fifteen years ago, Germany, already the leading military power of Europe, and possessed of an army supposed to be invincible, planned and commenced to build up a navy that should some day be strong enough to challenge the supremacy of the British fleet. This was very openly stated; and the ever increasing strength of the German navy since that time has constituted what we learned to call the German menace. The final answer of the British Admiralty to the German plans was the determination to build two ships for every one built by the Germans, and to keep always ready for action in or near the North Sea a fleet that should outnumber the German fleet two to one.

But Germany hastened her preparations, began to build her ships more rapidly, and more secretly, so that their number might not be known; and enlarged the Kiel Canal so that the greatest of her battleships could go from one sea to the other at will, thus giving her navy command of both seas from the same base, and greatly increasing its effective strength. At the same time she improved her submarines, hoping by means of this new craft so to reduce the number of British ships that the two fleets might meet on nearly equal terms on the day of the great battle which should decide the issue.

With all these preparations, war was inevitable, unless Germany should at last relent, or Britain yield without fighting. Germany did not relent, and Britain did not yield.

It was expected, both in England and in Germany, that the great struggle would not begin until this year or next. But the Kiel Canal was finished in June last, and the war began in August.

No doubt this is the war which President Kruger thought he was starting in South Africa years ago — the war which he said would stagger humanity; but Germany was not ready then. Later there was a saying that Germany would strike when Germany's hour had struck, meaning when she thought that it would be most to her advantage, and that prediction has come true.

Perhaps we should say that there are really two wars now in progress — a war with Russia and France, for the protection, not to say the extension, of German and Austrian territory, and for the extension of German influence in western Asia; and a war with Britain for control of the seas. We can very well believe that Germany would have preferred to finish the first war before the second began; yet, as events have proved, she was in great measure ready for both. Her claim that Britain, France and Russia began the war is disproved by the fact that the British and French armies were not ready for it, and are hardly ready yet; while the Russian fleet and army may not be fully ready for another year. But the British fleet was ready, and its power was immediately felt.

Never in the history of the world has there been such a wonderful example of the value of sea power as we see today. The last of the German cruisers known to be at large has been driven from the ocean. German merchant ships disappeared long ago, and the German battleships are confined to their home ports. A few submarines in the coast waters of Europe interfere to some extent with the trade of the Allies; but so little that their effect is hardly noticeable. Mail and passenger ships sail as usual. British armies from the United Kingdom and British armies from overseas have been safely transported to their destinations without loss of a man. British and French ports are open to the ships of neutral nations, while the ports of

the enemy countries are practically closed. Britain's ships have the freedom of the seas, her commerce goes uninterrupted, her food supply for the homeland is safe, her telegraphic communication with the colonies and with neutral countries is unbroken, her power is felt everywhere, and all because of the unquestioned superiority of her battle fleet. Were that to fail, she would soon be subdued and the British Empire would be no more.

HINTS FOR MAY AND JUNE.

Empire Day.

May is a particularly interesting month in the schoolroom. The lassitude and restlessness that affect teachers and children alike in the first mild days, give way to the fresh vigour and stimulation of thought that comes with the increasing strength of the sun, and the stir of life in the growing things about us. There is more enjoyment in being out of doors, and more of outdoor life can be brought into the schoolroom. The suggestions given in the April REVIEW, by Miss Cossitt, Professor Perry and Professor DeWolfe, for observations and their records in the schoolroom, are no doubt followed more or less closely by all country teachers.

And all Canadian children look forward eagerly to the great spring holiday, Victoria Day. The memory of the great Queen is linked in the minds of many town dwellers with the delight of the first escape into the country after the long winter. This is for all, children and elders alike. As yet our Empire Day celebrations are confined practically to our schools.

Some teachers find the keeping of Empire Day an irksome task. It requires an effort to break through routine, and arrange a special programme. It takes some skill to keep children well in hand when they are excited, as they easily become when routine has been broken. And it is not easy for a teacher working single handed to summon to her aid the enthusiasm necessary to make the observance of the day a success. But probably the reason for most of the indifference is that teachers do not fully understand the object of Empire Day, and secondly, do not know how to go to work to attain it.

Well, in the first place, it is required in the

regulations, and so is a simple matter of duty; "such exercises as will tend to cultivate a love of country and loyalty to the Empire should be carried out with spirit and earnestness." (*Manual of School Law for New Brunswick*.) A duty that is done half-heartedly and grudgingly, without "spirit and earnestness," is always tiresome and irritating. Faithfulness in duty binds us more than ever today, in the face of the danger that threatens our country, and of the splendid devotion and self sacrifice with which her sons and daughters have met it. Sir John French wrote from the front to his wife to tell the women to be worthy of the brave men who were fighting for them. They are giving their lives, and shall we hesitate to give our time and labour and to sacrifice our own little prejudices and self-indulgences to our duty? I believe there is no task too small to be met in this spirit. How much more should we feel it when the task is such a great one — to prepare our children to take up the trust of citizenship.

Special observance of Empire Day in connection with the war is urged by the authorities. The words of Lord Meath, who has done so much to encourage Empire Day throughout the British Dominions, deserve particular attention. This is the moment, he says, "when the watchwords of the Empire movement — Responsibility, Duty, Sympathy, and Self-sacrifice should ring in the ears of every subject of the King."

"Love of country is a gift of God," said a brave Scotch nun, writing from a Belgium convent in the first terrible days of the invasion. And we have to admit sadly that there are people to whom that gift has not been given. If our love for our country is weak and selfish, we ought to pray that it may be made stronger and deeper, and that we may help to instil it into the children under our care.

Other nations teach patriotism in their schools much more definitely and directly than we do. They make full use of the opportunities of national holidays. The Germans have been called upon to observe Bismarck's birthday, April 1, "in a manner deep, far-reaching and mighty." In what spirit is it to be celebrated? In the spirit of hate — hate for England. The writer of the instructions, an officer of high rank, calls upon the teachers of Germany in these words, "You thousands of teachers to

whom millions of German children look up with eyes and hearts, teach Hate, unquenchable Hate! You guardians of the truth, feed this sacred Hate!"

Thank God, we have better ideals than this to set before our children. And we must teach our lessons as ardently and faithfully as our enemies teach theirs. After the war, the Empire will have new and difficult problems to solve, and tasks to fulfil; the boys and girls now in our schools will be the men and women who must be trained to meet them.

The spirit that we wish to invoke must be based upon solid knowledge of geographical and historical facts, and this knowledge should be gained during the year, and drawn upon for summaries and review for the work in school on the morning of Empire Day. The extent and population (in round numbers) of the Empire; the situation of the different parts; the names, capitals, form of government, races, and distinctive importance of the self-governing Dominions and India, and of the great crown colonies; some knowledge of the great men who have helped to found or to build up the Empire; the causes of the great war, and the share taken in it by the overseas Dominions; the origin of Empire Day, and the fact that in 1914 it was kept by millions of children all over the world. These are things that should be learned in preparation for Empire Day.

The other overseas Dominions should be studied. There can be no interest without knowledge, and how can we feel the bond that unites us with all the parts of the Empire if we know nothing about those countries and their share in our common inheritance and responsibilities? Especially in connection with the war, dwell upon the part taken by Australia, New Zealand and India. The REVIEW "Current Events" columns will give information about them. Especially lead your pupils to see that the ready loyalty and devotion of all parts of the Empire are a witness to the freedom and justice of British rule. This is particularly marked in the case of the generous offerings from India, whose people do not govern themselves, and the steadfastness, on the whole, of the Dutch in South Africa, who fifteen years ago were fighting against us.

What feelings and resolves should be the out-

come of this teaching? First, the ennobling feelings of sympathy and enthusiasm that come with the sense of being part of a great whole, flooding out all narrow pride and envy and selfishness; and then, the desire and resolve to be worthy citizens of so great an Empire. Feed these enthusiasms with stories of our best and greatest men and with the noble words of great poets.

We give elsewhere some suggestions for Bible readings for the opening exercises. The following songs are named in "The Federal Magazine" as suitable: "Home, Sweet Home," "Hearts of Oak," "Auld Lang Syne," "Scots Wha Hae," "The Blue Bells of Scotland," "Rule Britannia," "Land of My Fathers," "March of the Men of Harlech," "The Minstrel Boy," "The Harp that Once," "The Flag of Britain," "Britannia's Sons," "Land of Hope and Glory," "O Canada" and "The Maple Leaf" will probably be on every programme. See that the children understand the words of the songs, as far as they can. Use them for oral and written composition work. A primary teacher in St. John elicited these explanations of lines in a favorite song. "Britain always stands for justice." *Small Boy*. "She'll look after the little fellow." "Britain's sons will rally at her call." *Six-year-old*. "Our daddies will get spunky enough to leave us and go help her."

Do your best to have the National Anthem reverently sung. It is not merely an expression of our own loyalty, it is a prayer to Almighty God.

Lessons on the flag should include one on the respect due to the flag as the symbol of our King and country, and children should be trained to handle it carefully, and never to let even a little flag fall in the dust to be, perhaps, trodden on or kicked about.

Poems for suitable recitations will be found in this and other Empire Day numbers of the REVIEW, and in the collections named in our last issue. All children should learn at least the first verse of Kipling's poem:

Land of our birth, we pledge to thee,
Our love and toil in the years to be,
When we are grown and take our place
As men and women with our race.

It will be found in full in the hymn book of the Church of England in Canada.

Empire Day teachings seem to us of such importance this year that we have given them nearly all our space, and can say nothing about June. The primary teacher, however, must not forget that the children's poet, Robert Louis Stevenson, was born on June 8, 1845. From "A Child's Garden of Verse" teach, "Singing," "Where go the Boats," "The Hayloft," "Flowers."

EMPIRE DAY IN AN UNGRADED SCHOOL.

In the March number of the REVIEW we offered a chart of the flags of the world to the teacher sending us the best short account of how to celebrate Empire Day in an ungraded country school.

Six letters on the subject have come in, and it has not been easy to decide which is the best. Some writers content themselves with giving rough notes, rather than a connected account, or a detailed programme. Some do not mention the war at all. Only one gives suggestions for both morning and afternoon programmes. As there is not one that seems to us altogether satisfactory, instead of printing the prize-winning letter as a whole, we give what seem to us the best suggestions of the different writers.

"Hoisting and salutation of the flag at nine o'clock. While the flag unfurls children and teacher join in "The Red, White and Blue," or any suitable patriotic song. The pupils then form in line, and bearing tiny flags, march to seats."

"For Bible reading I suggest Deuteronomy VIII." "Composition writing and reading by grades IV and V on "Our Empire" or other patriotic topic. Flag drawing and painting by grades I, II and III, followed by a short lesson on the flag by the teacher. "Canada's duty. How Canada has proved her loyalty. Why she should be loyal." These are presumably subjects for discussion or composition.

"Have map lesson on the Empire. Older pupils locate the British possessions. Mention their value to the Motherland, and her value to them."

"Let the children apply these quotations to Britain — "The sun never sets on her territories. (Other quotations given)."

"Explain to the children why we celebrate

Empire Day — to awaken the people of the Empire to a sense of their serious duties and responsibilities."

"Sing patriotic hymns to enliven the children" (rather to induce the right mood of enthusiasm).

One teacher describes quite elaborate preparations for the afternoon meeting, including writing and decorating invitations and programmes during the hours for drawing and writing; this to be done at least a week beforehand.

All the writers suggest patriotic readings and recitations by the pupils, and addresses by clergymen or other prominent men. The following choice of subjects for such speeches and their arrangement is excellent. "The first speech near the beginning of the programme on "The greatness of the Empire" should give the pupils a true idea of its extent. Follow this by Kipling's "Recessional." The second speech on "How the Empire attained greatness," and the last at the close of the programme on "How pupils may help the Empire."

The prize is awarded to Miss Wilhelmina Hayward, Bedell, Carleton County, N. B., whose paper is the best as a whole. Miss Ruth Trerice, Wentworth Station, Cumberland County, N. S., deserves honourable mention, and some good suggestions were sent by Miss Nellie R. Corning, Beaver River, Yarmouth County, N. S., and Miss E. M. Marshall, Dewolfe, Charlotte County, N. B.

THE LEAGUE OF THE EMPIRE.

This is a suitable time to bring again before our teachers the aims and work of this organization, set forth as follows in the Toronto Mail and Empire of a recent date.

We should not be unmindful of those movements within our Empire, the object of which is to cultivate an enlightened, comprehensive and progressive spirit of patriotism, as wide as the Empire itself and as sympathetic as the aspirations and needs of all the varied nationalities within its bounds warrant.

Prominent amongst these movements is that entitled "The League of the Empire." This league was founded in 1901, in London, England, Lord Strathcona being the first president.

The fundamental aim of the league is to bring the overseas dominions more closely into touch with the Motherland, and to promote a better

understanding among all parts of the Empire by means of educational co-operation.

The league has from the first made a special effort to unite the schools of the Empire in management and in methods. Two courses have been followed:

(1) Representative gatherings have met three times in London, to which delegates have been sent from all parts of the Empire, to consider every phase of educational progress. The next convention will be held in Toronto in 1916.

(2) Teachers in all parts of the Empire are introduced to each other by correspondence, for the exchange of school work and methods of teaching.

(3) Pupils are also linked with pupils in different parts of the Empire for correspondence on any subjects that may be of mutual advantage.

A Canadian branch of the League of Empire was formed in 1912. As the next meeting of the Teachers' Associations of the Empire will be held in Toronto at the invitation of the Ontario Government, in 1916, the officers of the Canadian branch are desirous that as many teachers and schools as possible may unite with the league.

The membership fee is one dollar per annum for each school, and for this fee the following advantages are secured:

(1) All the teachers in the school may be officially connected with the teachers in a school in some other part of the Empire.

(2) The senior pupils may be placed in correspondence with a school or with schools in other parts of the Empire.

(3) The league magazine will be sent four times each year.

(4) Members may use the league clubhouse while in London. Correspondence may be addressed to the club, 28 Buckingham Gate, London, and the rooms may be used for writing and reading.

(5) Special arrangements are made each year by the head office that all overseas members of the league who are in England should be personally invited to historic spots and given unique opportunities to see the most interesting things in and about London.

(6) The Canadian branch of the league will arrange and conduct excursions to the Homeland

each year at the lowest possible rates for teachers and their friends.

The president of the Canadian branch of the league is Maurice Hutton, M.A., University College, Toronto; the honorary-secretary is Mrs. H. S. Strathy, 71 Queen's Park, Toronto and the honorary-treasurer is Mr. Henry Baker, 23 Roxborough street west, Toronto.

NOT A PEACE BUT A TRUCE.

LADIES' NATIONAL COMMITTEE SEND OUT A CIRCULAR.

In connection with letters and circulars that have been sent broadcast throughout Canada, especially from neutral countries, for the purpose of bringing the war to an immediate close and generally propagating a peace movement throughout the country, the following important statement has been issued by the National Committee for patriotic service. The statement is signed by Mrs. Gooderham, president, and Mrs. Plumtre, secretary of the Committee.

The statement is as follows: Letters and circulars in praise of peace have been issued, calling on women all over the world to unite in a great effort to stop the war. In some cases, signatures to a petition are requested; in others, membership in a peace society. In these circumstances the committee calls your attention to the following considerations:

Few indeed are the men or women who would hesitate to declare themselves "in favor of peace." No neutral nation can hate war with half the intensity of hate felt by the nations who are bearing war's burdens. But declarations in favor of peace may be represented as condemning all who fight, and such use has been made of them during this war. Though we hate war, and though we may admit that there is always wrong at the root of war, yet we cannot unconditionally condemn all war, nor regard all belligerents as equally guilty. History teaches us that nations and individuals have been compelled to draw the sword in defence of the rights of the weak and of the principles of truth, honor and liberty, holding these dearer than peace, and even than life itself.

The war in which we are now engaged is no mere scramble for gain, nor quarrel over rights in which all parties are alike to blame. It is

rather a struggle between the principles of law and of force—between the policemen and the armed criminal whose liberty is a menace to the neighborhood. In such a conflict, neutrality has no particular merit; while to entreat the policemen to stop fighting does not tend to promote peace, but only tends to prolong a period of terror and insecurity.

We have drawn the sword to defend the rights of the weak, the liberty of the many, and the pledged honor of the Empire. To sheathe the sword before these ends are achieved is to render useless the sacrifice of countless lives already laid down in defence of these great principles; for could we at this juncture secure peace, we should but leave to our children a dreadful legacy of hate and uncertainty. It would be, in truth, not a peace but a truce, lasting only until the nations had recovered sufficiently to test the issue once more by an appeal to arms; and worse than all, we should leave Belgium to its fate as a German province.

Shall not the women of this country bear their part in this war with the same high courage and steadfastness of purpose as animate our troops? And what is our share?

To possess our souls in patience during war's hardships and uncertainties; to refrain from embarrassing our rulers by demands for a premature and illusory peace; to prepare ourselves for the new conditions and duties which peace will inevitably bring while applying ourselves to the peculiar tasks imposed by war; and above all, so to bear ourselves, as to be an inspiration in courage and self-sacrifice to the men who are fighting for our Empire and for us. This is our share.

When Germany has learned that right is stronger than might; when the mailed fist no longer threatens Europe, then may we hope for a peace which our children's children may inherit. And with such a peace, we may hand on, unbroken, the great traditions of our Empire—honor unstained, liberty safeguarded, justice vindicated.

Such are some of the conditions to be considered before we unreservedly condemn war or make petitions for immediate peace.

Signed on behalf of the National Committee,

MARY R. GOODERHAM, Pres.

ADELAIDE M. PLUMPTRE, Sec.

77 King street East, Toronto.

BIBLE READINGS FOR OPENING EXERCISES.

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| 1. Psalm, xv. | 12. St. Matt., ix, 27-35. |
| 2. St. Matt., v, 1-10. | 13. Psalm, xxxiv, 11-22. |
| 3. Psalm, xix. | 14. St. Matt., xii, 46-50. |
| 4. St. Matt., vi, 5-15. | 15. Psalm, xxxvii, 1-9. |
| 5. Psalm, xxiii. | 16. St. Matt., xiv, 22-33. |
| 6. St. Matt., vi, 24-34. | 17. Psalm, xxxvii, 23-31. |
| 7. Psalm, xxiv. | 18. St. Matt., xviii, 1-6. |
| 8. St. Matt., viii, 5-13. | 19. Psalm, xci, 1-7. |
| 9. Psalm, xxvii, 1-6. | 20. St. Matt., xviii, 21-35. |
| 10. St. Matt., viii, 23-27. | 21. Psalm, xcvi. |
| 11. Psalm, xxxiv, 1-10. | 22. St. Matt., xix, 16-22 |

Bible Readings for Empire

Deuteronomy, viii.

Psalm, xxxiii, 8-22. Psalm, xli.

Deuteronomy, x, 12-15, xvii, 18-20.

WHO, WHAT, AND WHERE COMPETITION.

This competition began in October, and the last set of questions was answered in the April number. Answers came in from ten different sources, but only three contestants persevered until the end. These are the M. L. L. Club of St. Stephen, N. B., M. V. L., and Jill. The prize goes to the first named, who got 90 marks out of a possible 118. Jill's mark is 67, and she would have run the prize winners hard if she had received the October number of the REVIEW. M. V. L., who sent in some excellent papers, got 64. The other contributors were Morleena Kenwigs, Peggotty, Zaire, A. L. F., G. B., J. E. M., B. H. C.

So much interest in the questions has been expressed that we have planned a similar set of papers for next year. One correspondent writes, "We all feel that they have been of great benefit to us, and I wish to thank you for the incentive to extensive reading." Another says, "I never knew before how many beautiful things had been said about friendship."

We thank all those who sent in answers, and hope to hear from them and from many others when the next contest begins.

The brave only know how to forgive; it is the most refined and generous pitch of virtue human nature can arrive at.

Cowards have done good and kind actions; cowards have even fought, nay, sometimes, even conquered; but a coward never forgave. It is not in his nature; the power of doing it flow only from greatness of soul.—*Lawrence Sterne.*

OUR FLAGS.

An Empire Day Play for Children.

JEAN T. LEAVITT.

[Any number of little children may take part. The two who do most of the talking should be older than the others.]

(A boy and girl come in).

GIRL.—Think of those lazy children, asleep this lovely morning, when we have planned so much for our Empire Day celebration.

BOY.—*(As the little people begin to stir outside).*
I think I hear them now.

CHORUS.—*(Behind the scene).*

It's the 21st of May,
Empire Day. Oh hurray!
We'll soon have a holiday
And play, play, play!

(Boys and girls run out; all join hands and sing to the tune of "Comin' Thro' the Rye").

Spring is coming, Spring is coming,
Birdies, build your nest;
Weave together straw and feather,
Doing each your best.

Spring is coming, Spring is coming,
Flowers are coming too,
Pansies, lilies, daffodilies,
Now are coming through.

Spring is coming, Spring is coming,
All around is fair;
Shimmer and quiver on the river,
Joy is everywhere.

We wish you a happy Empire Day.
(All bow to audience).

(Breakfast bell rings behind scenes).

GIRL.—Breakfast! let's hurry. Too bad we have to eat today!

(All run out).

(Boy and girl come in. Girl carries Union Jacks concealed in paper parcel. Boy has St. George's, St. Andrew's and St. Patrick's flags in his pocket).

BOY.—Have you brought the flags?

GIRL.—Yes, here they are.

BOY.—Let's take them out of the parcel.

GIRL *(Trying to undo a knot)*.—Have you a knife?

BOY.—A knife! of course, every boy carries a jack knife. Here, hand over the parcel to me. *(Makes as if to take it.)*

GIRL.—No, I'll hold it while you cut the string.

(Noise without).

BOY.—*(Listening)* Here come the children. We'll see how much of yesterday's flagstory they remember.

(Enter children and form a semicircle facing audience).

Here is a flag for everyone. *(Gives each child a Union Jack.)* Now see how well you can answer.

GIRL.—*(holding up big flag).*

A Union Jack we call it,
Now, why that "Union" word?

ALL.—*(holding up flags).*

"UNION" means united,
And yesterday we heard
That our flag's the Union
Of the Red, the White, the Blue,
And the crosses of three countries
Are united in it too.

GIRL.—How nicely you have answered
The question put to you.
Now, see how well you'll manage
The rest of our review.

BOY.—My father is a soldier
Three flags *(produces them)* he gave to me,
And yesterday I told you
Their names and history.

(He hands St. Andrew's Cross to a little girl who steps forward.)

BOY.—Hold up the narrow white cross
That slants across the blue.

ALL.—St. Andrew's Cross for Scotland,
A loyal land and true.

BOY.—*(handing St. Patrick's Cross to a second little girl).*

Another cross, a red one,
It slants just like the white.

ALL.—St. Patrick's Cross for Ireland,
An Irishman's delight.

BOY.—*(handing St. George's Cross to a third little girl who steps into line beside the other two).*

A white flag with a straight red cross
The widest of the three.

ALL.—St. George's Cross for England,
For King, and liberty.

TOGETHER.—*(holding up flags).*

Then England's, Ireland's, Scotland's flag united stands,
To rule and claim the loyal hearts in British lands.

(They march and sing "Up with the Union Jack, Boys" or "We'll Never Let the Old Flag Fall.")

THE REAL TEST IN SCHOOL EXAMINATION.

The teacher stood watching the class in algebra take a test. It was a fair examination, containing no "catch" questions, but problems similar to those which the pupils had solved day after day. There was no need of haste, for the teacher had said, "Work carefully, take the problems in order; I shall rank you on what you do, whether five or two." Again, "Do not hurry; it is correctness, not amount, which counts."

The boys were working deliberately, with here and there a frown at a problem which would not "come right;" but there was no such placidity among the girls. Each face was tense, fingers flew, there were mad dashes after erasers, gasps of consternation, and one girl, with hands clenched, actually jumped up and down in her seat. At the striking of the gong they filed out of the room, utterly wearied. All this nervous force was expended on an ordinary test, the like of which, in some study, they met once a week.

The papers handed in were such as one would expect under these conditions. Those written by girls who work best under pressure were perfect, but most of them fell below the daily work; several contained portions of each problem, but not one completed. The owners proffered time-worn excuses with glibness: "I never do anything on tests;" "I always go to pieces;" "I had a headache;" and over and over. "I was nervous."

For once they received no sympathy; the teacher had been considering whether or not an examination is such an ordeal as it is customarily considered. When she returned the corrected papers she talked not about the failure in mathematics, but the failure in self control.

"I can teach you mathematics," she said, "but I can't teach you self-control. No one but you yourself can teach that. You offer 'nervousness' as an excuse for failure. You are on the road to being nervous women — the kind of women who 'go to pieces' in an emergency, who have nervous prostration when things go wrong. All of you know women of that class, and many of you know how much unhappiness one causes. If you want to be that sort of a woman, no one can stop you. On the other

hand, if you want to be a helpful, reliable woman, the kind one naturally turns to in trouble, you can make yourself so, but you have got to begin now to control your nerves.

"You can begin by learning to take tests calmly. Tests do not stop with school; there will be test days all your life. If you go into an office, there will be days when your employer will be disagreeable, the accounts will be tangled, and you will make mistakes in your dictation. They will be test days. If you are a teacher, there will be times when the classes will be maddeningly stupid and the pupils exasperating. If you are a house-keeper, there will be mornings when the bread will not rise, the cake will burn, the milk sour, and the meat fail to come from the market.

"You are going to meet those test days just as you meet school tests now. If you can keep your head, you'll succeed. If you lose your grip and go to pieces as you did yesterday, you will be a failure. Anyone can work when all is smooth. It is a crisis that shows what one is made of."

Some of the girls giggled, some sulked, but most of them seemed to be considering the new idea that "nervousness" is not unconquerable. When the time for the next examination came, the teacher said:

"This is to be not only a test of your knowledge of algebra, but also a test of your self-control. Whether you do all or none of the problems, one thing you are to do — keep a grip on yourself."

During the next hour, whenever she saw the tense look, the rigid pose, she said firmly, "Quiet down; we are not going to be nervous to-day," and the girl instantly relaxed. As a natural consequence, the papers of this easily taken examination were the best of the term:

If teachers in school and parents at home would unite in discouraging the view of examinations which holds them unavoidable but abnormal ordeals in which "cramming" and luck are prominent factors, and substitute the thought that just as school work is a forerunner of world work, so school tests are preliminary training for life tests, the pupils themselves would come to look upon the matter in the same light. A test should never be considered a legitimate excuse for "nervous-

ness." An actually nervous girl should be under a physician's oversight, eating, sleeping and studying according to his directions, but in most cases the nervousness is under the girl's own control, though she may not believe it. Some girls insist that they 'cannot help giggling in class, but when every outburst of hysterical snickering is instantly punished, they find that they are able to control themselves.— *Western School Journal*.

FOR THE BLACKBOARD.

Fear God, Honour the King.

Responsibility, Duty, Sympathy, Self-sacrifice.

Let your thoughts be high,
Great hearts are glad when it is time to give.

Not failure, but low aim, is crime.— *Browning*.

Lord God of Hosts, be with us yet!
Lest we forget. Lest we forget!— *Kipling*.

Fellowship is life, and the lack of fellowship is death; and the deeds that ye do upon the earth it is for fellowship's sake that ye do them, and the life that is in it shall live on for ever and ever and each one of you part of it.— *WILLIAM MORRIS*.

The time of the singing of birds has come.

The welcome guest of settled spring
The swallow, too, has come at last.

Such a starved bank of moss!
Till, that May morn,
Blue ran the light across —
Violets were born.

— *Browning*.

New occasions teach new duties,
Time makes ancient good uncouth,
They must upward still and onward,
Who would keep abreast of truth.

— *Lowell*.

He serves his country best
Who lives pure life, and doeth righteous deed.

If you were born to honour, show it now;
If put upon you, make the judgment good
That thought you worthy of it.

— *Shakespeare*.

Righteousness exalteth a nation.

EMPIRE DAY QUOTATIONS.

NON NOBIS SOLUM.

Today where'er on loyal winds,
The Empire's flag is blowing
Methinks perchance as ne'er before
The blazoned cross is showing.

For sacrifice the cross still stands;
The old flag tells its story
That never yet did selfish aim
Blaze out the path to gory.

And they who love — aye, truly love —
That old flag proudly streaming,
Will show that love in service true
And sacrifice, not dreaming.

And they who fight beneath its folds
Will find true love constraineth
That never act or word of theirs
Its boasted honour staineth.

True Britons! ours a heritage
Long centuries have hoarded;
We dare not risk the nobler gifts
And choose the base and sordid!

We dare not compromise with wrong;
Our lofty standards lower
To do the things we loathe and hate
For selfish gain or power.

Unsullied let the old flag fly!
Still let the Empire's story
Be one of justice, truth and right
That way alone lies glory!

— *Emma Veazey*.

LAND OF MY FATHERS.

Land of my fathers! wheresoe'er I roam,
Land of my birth! to me thou still art home,
Peace and prosperity on thy sons attend
Down to posterity their influence descend.

Though other climes may brighter hopes fulfil,
Land of my birth! I ever love thee still!
Heaven shield our happy home from each hostile band,
Freedom and plenty ever crown our native land.

— *Welsh National Anthem*.

Britain's myriad voices call,
"Sons, be welded each and all,
Into one imperial whole,
One with Britain, heart and soul;
One life, one flag, one fleet, one throne,
Britons, hold your own.

— *Tennyson*.

MEN WHO DIE FOR ENGLAND.

Men who die for England
 Never die in vain.
 Dying conquerors, dying masters,
 Dying firm mid fierce disasters,
 England's every son
 Dying, duty done,
 Gives the life she lent him back again.
 Men who die for England
 Never die in vain.

Rushing seas they rode victorious,
 Conquering seas have made them glorious
 Where in marshalled rank
 Down to death they sank,
 Met in order stern the roaring main,
 Proud for pride of England,
 Died and not in vain.

Sons of Viking! old the story,
 Desperate odds and death-fight gory.
 Over all your graves
 Late or soon there waves
 Proud the flag ye held up high from stain,
 Floats the flag of England
 Fought for not in vain.

Beacon fires are ye whose ashes
 Fade; yet forth their splendor flashes
 Answers height on height,
 Bright and yet more bright,
 Answers all your England, hill and plain,
 Men who die for England
 Do not die in vain.

Prince and labourer, clerk and yeoman,
 One we rise to front and foeman,
 Who can dare forget
 Now to pay his debt,
 Give what England gave to her again,
 Men who died for England
 Have not died in vain.

— Margaret L. Woods, 1899.

A LITTLE BIT OF ENGLAND.

There's a little bit of England in my keeping, do you
 know —
 A little bit to toil for, and to love, come weal or woe;
 There's a leaf of England's story handed down through
 ages hard,
 And a bit of England's glory that I'd give my life to guard.
 There's a little bit of England in my keeping, do you
 know —
 Wrapped about with wondrous legend of the times of long
 ago,
 When the cloud of battle darkened 'gainst the flag that
 flies today,
 And the knights to war-notes hearkened massing splendid
 for the fray.

There's a little bit of England in my keeping, do you
 know —
 A little bit of Homeland that God gives us here below;
 There's a little bit of England 'gainst the wide world that
 we'd hold
 Till it knew that men of England have the hearts of
 knights of old.

— From the "Pall Mall Gazette."

A NATION'S STRENGTH.

Not gold, but only men can make
 A people great and strong —
 Men, who for truth and honour's sake,
 Stand fast and suffer long.

Brave men who work while others sleep,
 Who dare when other fly —
 They build a nation's pillars deep,
 And lift them to the sky.

— Emerson.

"May I tell you, in a simple parable, what I think this war is doing for us? I know a valley in North Wales, between the mountains and the sea, a beautiful valley, snug, comfortable, sheltered by the mountains from all the bitter blasts. It was very enervating, and I remember how the boys were in the habit of climbing the hills above the village to have a glimpse of the great mountains in the distance and to be stimulated and freshened by the breeze which came from the hilltops, and by the great spectacle of that great range.

"We have been living in a sheltered valley for generations. We have been too comfortable, too indulgent, many, perhaps, too selfish. And the stern hand of fate has scourged us to an elevation where we can see the great everlasting things that matter for a nation, the great peaks of honor we had forgotten, duty and patriotism, and, clad in glittering white, the great pinnacle of sacrifice pointing like a rugged finger to Heaven. We shall descend into the valleys again, but as long as the men and women of this generation last they will carry in their hearts the image of these great mountain peaks, whose foundations are unshaken though Europe rock and sway in the convulsions of a great war."

— From the Queen's Hall speech of Rt. Hon. David Lloyd George, Chancellor of the Exchequer.

QUESTIONS ON THE WAR.

1. What act was the immediate cause or occasion of the war?

2. On what date did war begin, and between what two countries? Relate briefly the steps by which all the nations now fighting came into the war. On what date did Great Britain declare war?

3. What nations formed the Triple Alliance The Triple Entente?

4. What was the first remarkable event of the war? The first great victory for the Allies? The first capture made by one of the overseas Dominions? The first great naval victory won by British ships?

5. What German colonies have been taken by the Allies? Answer in detail.

6. Give particulars of the battle of Ypres? Why is it called "a decisive action?" What did it decide?

7. What can you tell of the share taken by (a) India, (b) Australia, (c) New Zealand (d) South Africa, (e) Newfoundland, (f) Canada, this war?

8. What is the importance to the Allies of the possession of the Suez Canal? By whom is it guarded, and against what forces?

9. Name the leader of the rebellion in South Africa and is the general in command against him.

10. What change in government has taken place in Egypt?

11. "The largest fleet of warships ever assembled for active service?" Where is this fleet? Of the ships of what nations is it made up, and what is it doing?

12. What is the first stronghold taken by the Russians, and what advantage does the capture give them?

13. Where are the following, and what is their importance in the present war:—Constantinople, Cracow, Antwerp, Bordeaux, Kiao-Chan, Liege, Neuve Chapelle, the Aisne, the Bosphorus, Calais, Louvain, Rheims?

14. Write short notes on Lord Kitchener, General Joffre, Admiral Jellicoe, General French, Sir Edward Grey, Mr. Asquith, President Poincare, King Albert.

15. What have (a) Poland, (b) Armenia to hope for from the results of the war?

16. Write in a list the names of the countries engaged in the war, opposite each write in separate columns: (a) the form of government, (b) the names of the ruler, (c) the name of its capital.

17. What answer would you give to the question, "Why is Canada at war?"

18. What was Lord Roberts message to the children of the Empire? What did he say was

the supreme duty of the citizen at the present time?

19. What amount of money has been recently voted by the Dominion Parliament for carrying on the war? Tell some of the ways by which this money is raised?

20. What has been the greatest work and triumph of the British fleet?

[These answers to nearly all of these questions are to be found in the pages of the REVIEW, chiefly in the Current Events columns, from August to May.]

THE ROMANCE OF THE BRITISH EMPIRE.

In my view the British Empire is the most romantic and wonderful thing in the history of the whole world. It is the only Empire ever founded on freedom, the only Empire which could claim that its outlying parts were buttresses of the central structure. Its history, if we choose to follow out the threads, is as complete a romance as the most ingenious weaver of plots could wish to find, and it has the added allurements of being the romance of fact, not of fiction. It is difficult in a few lines to conjure up that romance so that we may appreciate in its full significance the *denouement* which should come from four centuries of world-wide endeavour and accomplishment. As I read of Canadians in their thousands crossing the Atlantic to fight for the motherland, of Sikhs and Ghurhas being landed at Marseilles to fight for France as the ally of Great Britain, of Australians and New Zealanders crossing the southern seas to defend Egypt from the German-led Turk, of Dutch and British fighting side by side under the leadership of General Botha to preserve South Africa inalienably for the British flag, my mind surges with thoughts of Cabot in his merest cockle-shell making his way over the waters of the Atlantic to the new isle for which Henry VII made him the munificent present £10; of the long struggle of Spain and Portugal, of France and England, to find a sea route to the Spice Islands of the east in order to capture the trade which passed over the desert now pierced by the Suez Canal; of the quest for the Austral land which when found was thought little of and was ultimately selected as best fitted for the convicts of England; of the desperate fights between England and France for the overlordship of the native races at the cape. I think of Queen Elizabeth and Sir Walter Raleigh, of Drake and Hawke and Rodney, of Clive and Wolfe, of Nelson and Wellington, and a thousand others who played heroic parts in the world-drama which opened with Columbus and Vasco da Gama when the one reached the west, and the other the east, Indies.

EDWARD SALMON.

CURRENT EVENTS.

By a recently invented process, caffeine, the alkaloid which causes the stimulating effect of coffee and tea upon the heart and nerves, can be extracted without much injuring the aroma and flavor.

The common mussel of the sea shore now finds a place on the bill of fare of some of the leading hotels in Boston. Once regarded as a wholesome article of food by the residents of our sea coast towns, its use was abandoned because it was said that some people were poisoned by it.

The discovery of a navigable channel in the delta of Kuskokwim river, Alaska, opens a new avenue of commerce. The river itself is navigable for a distance of six hundred miles from its mouth.

The Cape Cod Canal has been deepened so as to permit of the passage of vessels drawing eighteen feet of water. Since last July, when the canal was first opened to traffic, over two thousand vessels have passed through.

We have been told that the war would really begin in May. It has already begun for the Canadians; who, in the second great battle of Ypres, on the twenty-second of April, held an important position, with great credit to themselves, but suffered heavy loss. The Germans, in immense numbers, had made an attack a little to the north of Ypres, hoping to break through the lines of the Allies. Instead of using artillery to clear a way, they used a heavy suffocating gas which compelled some of the French troops to fall back. The Canadians, who were next in line, were obliged to retire, so as to keep the line unbroken. In doing so, they lost four of their big guns; but they recovered these later in the day. Reinforcements came and the advance of the Germans was checked; but it was the heroism of the Canadians that saved the day. The battle continued for several days, the Allies recapturing most of the ground that they had lost; but there is every reason to believe that the Germans will renew the attack in the effort to force their way through to Dunkirk and Calais. On the last day of April, Dunkirk was bombarded by German shells supposed to have come from great guns in a hidden position more than twenty miles away.

It is not surprising that the valor of the Canadians should win applause in Britain and France, as well as in Canada where the rejoicing is mingled with grief; but there was unexpected sympathy in the statement of a leading New York weekly that every American's heart beat faster when the news was flashed across the ocean. "In this supreme and solemn hour of victory," the editor of the "Independent" says, "when the blood of her sons reddens like the maple leaf the clay of Belgium, we realize more than ever that Canada's heritage and civilization are ours also. The Canadians are Americans." This second battle of Ypres, or battle of the Yser Canal, as it will probably be called, has not only brought the war nearer to us, but has brought us nearer to our neighbors. There has been much fighting in other parts of the western field during the month, but without important results.

At sea there has been the usual story of the sinking of vessels by German submarines, with more than the usual disregard for the lives of neutrals and non-combatants.

There is a report that eight of these submarines were entrapped and destroyed by the British on the last day of April.

A French cruiser has been torpedoed and sunk by an Austrian submarine on the coast of Italy.

After taking several of the important passes of the Carpathians, the Russians have been halted in their southward movement by German and Austrian armies which are threatening them on the east flank and on the west. A successful movement from either direction would cut their communications.

Of the three long battle lines, from the Baltic to the Carpathians, from the Danube to the Adriatic, and from Switzerland to the English Channel, the Russians hold eight hundred and fifty-one miles, the Serbians and Montenegrins two hundred and seventeen miles, the French five hundred and forty miles, the British but thirty-one miles, and the Belgians seventeen miles.

The entrance of Turkey into the war had the desired effect of drawing off Russian troops for the protection of Russian and Persian territory in the Caspian region, and British troops for the protection of Egypt. A small army of French and British troops is acting in co-operation with the fleet in the Constantinople expedition, and landings have been made at three points along the coast. Australian and New Zealand troops are among the British forces. Another British army at the mouth of the Euphrates is principally of Indian troops. The South Africans have all that they can do to carry on the war along their own borders, and have recently made considerable progress in the conquest of German Southwest Africa. If these scattered forces could be used in Europe against the armies of the Central Empires, they would make a welcome addition to the strength of the Allies.

The Queen Elizabeth now at the Dardanelles, and another new British ship which has just joined her, are the most powerful ships afloat; but it is said that a new type of battleship is now laid down in an English shipyard which will be far more swift and more powerful than they are, and will necessitate the adoption of new methods in battleship construction by all nations.

It seems strange to learn from Chili that the nitrate fields have stopped work because of the war in Europe, throwing fifty thousand men out of employment.

The Prince of Wales was actively employed as a despatch bearer in one of the recent great battles in Flanders. The Duke of Brabant, eldest son of the King of Belgium, has enlisted as a private in one of the Belgian regiments.

A military aviation school is to be established in Toronto, and there are over a hundred applications for admission.

The defeat of Villa by Obregon, Carranza's leading general, has brought about a new situation in Mexico; but it is not believed that either Carranza or Obregon will be able to form a stable government. Meanwhile Huerta, formerly provisional President of Mexico, is now in the United States, and his presence may have some effect upon Mexican affairs, even if he does not attempt to place himself again at the head of the government.

SCHOOL AND COLLEGE.

The Nova Scotia Farmers' Association are urging upon the provincial government the advisability of having agricultural subjects treated in the textbooks in grades three to ten.

At the closing of the Evening Technical School of New Glasgow, N. S., Principal McLeod presided and the students were addressed by Professor Sexton of Halifax and by School Commissioner McColl. Thirteen classes in all were held during the session, and testimonials were presented to the students who had made most progress. Exhibits of drawing, dressmaking and cooking witnessed to the excellence of the work done.

Of fourteen Canadian Rhodes scholars who, but for the war, would now be in residence at Oxford and are serving either with the army or the Red Cross Society, six are from the Maritime Provinces. These are:

V. K. Mason, Nova Scotia, 1914, Clearing Hospital, Canadian Expeditionary Force.

W. M. Billman, Nova Scotia, 1913, 16th Batt. (Universities and Public Schools), Middlesex Regiment.

A. N. Carter, New Brunswick, 1913, 2nd Lieut. 8th Batt. Yorks and Lancashire Regiment.

A. L. Collett, Prince Edward Island, 1913, 2nd Lieut. 8th Batt. Gloucester Regiment.

H. T. Reid, Nova Scotia, 1912, 2nd Lieut. 9th Division R. F. A.

F. M. Smith, New Brunswick, 1912, 2nd Lieut. Lancashire Fusiliers.

In the Amherst, N. S., "News and Sentinel" of April 10, Supervisor Lay pays a warm tribute to the memory of Miss Elizabeth McKinnon, who lately died in California. Miss McKinnon was for ten years a member of the Amherst school staff, and afterwards became preceptress of the State Normal School of San Jose, California.

The Board of Governors of Acadia University have decided to erect a new Academy building to replace the one lately burned. The new Academy will cost about \$30,000 and will be built on a lot south of the former site and near the college buildings. There will be accommodation for from fifty to sixty students.

The four weeks course at the Sussex Agricultural School was most successful. Twenty-four students attended throughout the session.

Ontario has about 270 rural schools in which agriculture is one of the subjects taught, and about 245 schools hold fairs each autumn to exhibit products or live stock grown or cared for by the pupils. The provincial Department of Agriculture has a plan to induce the children in the rural schools to raise potatoes, a bushel each child, for patriotic purposes. Teachers' salaries are increasing in Ontario, especially in the rural schools.

Mr. J. Stewart Henry of the St. John, N. B. teaching staff, has leave of absence on half pay to take a six weeks' military course at Ottawa.

Prince Edward Island has an organization known as the Southern Teachers' Association, which comprises all the teachers of the seventh school inspectorate of the province.

This association has as officers: Honorary president, Mr. Vernon Crockett; inspector president, H. Christopher; S. Mellish, vice-president and secretary-treasurer, A. B. Simpson.

The object of the association is to draw the teachers together for mutual benefit and for furthering the teaching profession generally.

The meetings are held fortnightly and the programme consists of speeches, papers, discussions, and the solution of any private difficulty a teacher may have.

Miss Edna Golding, lately of the staff of the Model School in Fredericton, N. B., was married on April 7th to Mr. John A. Reid, vice-president of the Hartt Boot and Shoe Company.

RECENT BOOKS.

A wonderful little shillings-worth is given in the war edition of Philips' Pictorial Pocket Atlas and Gazetteer. Inside the front and back covers are maps of the eastern and western war areas, respectively. Then we have three pages of fine print on the events that led to the war, British and German army organization, and the comparative strength of the belligerents. Then follow physical relief maps and typical illustrations, and political maps brought up to date. Of special interest at this time are the comparative maps of the world in 1500, 1800 and 1910, showing colonial expansion and communication. There are diagrams showing the comparative trade, manufacture, shipping, revenues, etc., of the chief countries of the world, and a gazetteer. This is just the book to have at hand when one of the countless questions that arise every day out of the war news, has to be answered promptly. [G. Philip & Son, 32 Fleet street, London, E. C.]

A convenient little edition of Macaulay's poems. Horatius, Lake Regillus, and the Armada is that of A. J. F. Collins, M.A., Oxon. It has maps, good and not too full notes and an introduction on Macaulay and the Lays. [University Tutorial Press, London.]

So many capital books are now issued cheaply that deal with both main and side issues in English history that there is no excuse for the history teacher whose lessons are dull for lack of illustration and comment. THE STORY OF ENGLISH INDUSTRY AND TRADE is simply and entertainingly told for older pupils in schools by H. L. Burrows, M.A., and contains much information that throws light on the bald statements of the ordinary history text-book. Condensed as the tale has to be, the writer finds room for apt quotations and picturesque detail. The chapters on "the fierce devouring sheep" on the great trading companies, and the great sailors are full of interest, and we wish that every class studying the Norman period had the chapter on Domesday Book before them. The illustrations are good and educational. [Adam and Charles Black, Soho square, London. 205 pages, 1s. 6d.]

We have previously noticed Black's JUNIOR REGIONAL GEOGRAPHIES. The latest volume deals with THE THREE

SOUTHERN CONTINENTS, which are treated of together because "they present certain similarities, especially with regard to climate and vegetation." The plan of all these books is the same. They contain numerous maps and illustrations, and after each chapter of information is a set of summaries, questions and exercises. [Adam and Charles Black, Soho square, London. 184 pages, 1s. 6d.].

The House-Fly.

Dr. C. Gordon Hewitt, Dominion Entomologist, has set forth a volume of 382 pages a carefully prepared and most instructive work in the House-Fly. The book is well illustrated with over one hundred figures. The colored plates of the House-fly, Lesser House-fly and Stable Fly are especially well executed. The work contains an extensive bibliography of the subject, and is divided into six parts of several chapters each.

Part I—The Structure and habits of the House fly.

Part II—The Breeding Habits; Life-history and Structure of the Larva.

Part III—The Natural Enemies and Parasites of the House-fly.

Part IV—Other Species of Flies Frequenting Houses.

Part V—The Relation of House-flies to disease.

Part VI—Control Measures.

This book will be read with interest by all students of nature, and to those particularly interested in this live subject it will be especially welcome.

It is published by the Cambridge University Press, Fetter Lane, London, E. C. Price, 15s. net.

N. B. OFFICIAL NOTICE.

EMPIRE DAY.

The participation of teachers, school officers, pupils and citizens generally is asked for a special emphasis upon Empire Day observance during the present year.

The special day to be observed will fall upon May 21st, and the Board of Education is desirous that every school shall observe it, not only by a programme of patriotic nature, but in addition, during the afternoon, by a public meeting, which should provide for speaker and at which the people of the district should be invited to attend.

The co-operation of Canadian Clubs, Daughters of the Empire, and all other patriotic societies throughout the Province is invited to assist in making observance of the day a notable one and worthy of the great crisis which calls it forth.

(Sgd.) W. S. CARTER,

Chief Superintendent of Education.

Educational Office, April 1, 1915.



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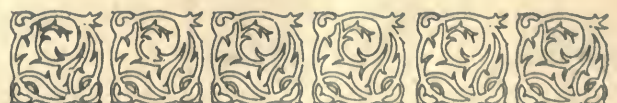
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Principal.

OFFICIAL NOTICE.

There will be a course of Physical Drill given at Fredericton this year, beginning July 13 next. There will be no bonus on account of the war. The course for Cadet Corps will not be given this year.

W. S. CARTER,
Chief Superintendent of Education.
Fredericton, N. B.,

New Brunswick School Calendar, 1915.

SECOND TERM.

- May 18.—Loyalist Day (Holiday for St. John City only).
May 23.—Empire Day (Observe May 21st).
May 24.—Victoria Day (Public Holiday).
May 24.—Last Day on which Inspectors are authorized to receive applications for Departmental Examinations. Reg 38-6.
May 25.—Examinations for Class III License begin.
June 3.—King's Birthday (Public Holiday).
June 4.—Normal School Closing.
June 8.—Final Examinations for License begin.
June 21.—High School Entrance Examinations begin.
June 30.—Public Schools close for Year.



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